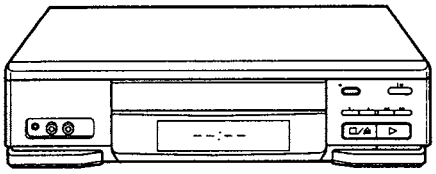
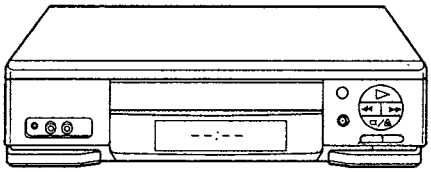
HITACHI

SERVICE MANUAL
Wartungsanleitung



– Except for F450E(UKN) –



– For F450E(UKN) –

V12256

SHOWVIEW

VHS

This video deck is a VHS type video recorder. For proper operation, only the VHS type cassette must be used.

VHS

Dieser Video-Recorder entspricht dem VHS-Format. Für richtigen Betrieb müssen daher VHS-Magnetband-Cassetten verwendet werden.

TK | No.4504E,G

VT-M430E(CT)
VT-M430E(PV)
VT-F450E(UKN)
VT-F450E(NA)
VT-F450E(VPS)

AF Mechanism

This service manual does not include information on the AF Mechanism used in this model.
Refer to the following manual for the AF Mechanism.

Manuals related to the VT-M430E/F450E

Name of Manual	Manual No.	Chapters Included
AF Mechanism	4412E,G	——

Diese Wartungsanleitung enthält keine Informationen über das in diesem Modell verwendete AF-Bandlaufwerk.
Für das AF-Bandlaufwerk siehe folgende Anleitung.

Anleitungen für die Modelle VT-M430E/F450E

Name der Anleitung	Anleitung-Nr.	Enthaltene Kapitel
AF-Bandlaufwerk	4412E,G	——

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT
Änderungen der Technischen Daten und Teile im Sinne ständiger Verbesserung vorbehalten.

VIDEO CASSETTE RECORDER
Video-Cassettenrecorder

April 1995 Video & Personal Media Systems Division, Tokai Operation

ENGLISH

SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers'. Critical parts are marked with ⚠ in the schematic diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without any danger of electrical shock.

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SPECIFICATIONS [For VT-M430E]

Format:	VHS PAL Standard
Recording:	Rotary Two-Head Helical Scan Azimuth Recording
Tape Speed:	23.39 mm/sec. — SP, 11.7mm/sec. — LP
Tape Width:	12.7 mm
Operation Temperature:	5°C to 40°C
Video:	PAL colour (system B & G) & CCIR monochrome signals 625 lines
Recording Time:	240 min. with E-240 cassette — SP 480 min. with E-240 cassette — LP
Aerial Input:	VHF channels 2 — 20 CATV channels S1 — S41 CATV channels X — Z+2 UHF channels 21 — 69
RF Output:	UHF channel 37 (32 — 42 adjustable) (System G)
Video Input:	0.5 to 1.5Vp-p 75 ohm Unbalanced
Video Output:	1Vp-p 75 ohm Unbalanced
S/N Ratio (Video):	More than 43 dB
Horizontal Resolution:	Colour 260 lines
Audio	
Input:	PERI: – 3.8 dBm 10 Kohm, LINE: – 7.8 dBm 50 Kohm
Output:	PERI: – 3.8 dBm 1 Kohm
S/N Ratio:	43 dB
Frequency Range:	70 Hz to 12 kHz
Power:	AC 230V, 50 Hz
Power Consumption:	21W (including timer)
Timer:	24-hour digital indication
Cabinet Size:	380 mm(W) x 95 mm(H) x 320 mm(D)
Weight:	Approx. 4.5 kg
Accessories Included:	1 — Aerial cable 1 — Infrared remote control handset 2 — Batteries 1 — Dust preventive socket cover

* Design and specifications are subject to change without notice.

SPECIFICATIONS [For VT-F450E(NA),(VPS)]

Format:	VHS PAL Standard
Recording:	Rotary Two-Head Helical Scan Azimuth Recording
Tape Speed:	23.39 mm/sec. — SP, 11.7mm/sec. — LP
Tape Width:	12.7 mm
Operation Temperature:	5°C to 40°C
Video:	PAL colour (system B & G) & CCIR monochrome signals 625 lines
Recording Time:	240 min. with E-240 cassette — SP 480 min. with E-240 cassette — LP
Aerial Input:	VHF channels 2 — 20 CATV channels S1 — S41 CATV channels X — Z+2 UHF channels 21 — 69
RF Output:	UHF channel 37 (32 — 42 adjustable) (System G)
Video Input:	0.5 to 1.5Vp-p 75 ohm Unbalanced
Video Output:	1Vp-p 75 ohm Unbalanced
S/N Ratio (Video):	More than 43 dB
Horizontal Resolution:	Colour 260 lines
Audio (Linear)	
Input:	PERI: – 3.8 dBm 10 Kohm, LINE: – 7.8 dBm 50 Kohm
Output:	PERI: – 3.8 dBm 1 Kohm, LINE: – 7.8 dBm 1 Kohm
S/N Ratio:	43 dB
Frequency Range:	70 Hz to 12 kHz
Hi-Fi Audio	
Frequency Range:	20 Hz to 20kHz
Dynamic Range:	More than 90dB
Wow and Flutter:	Less than 0.005% WRMS
Power:	AC 230V, 50 Hz
Power Consumption:	23W (including timer)
Timer:	24-hour digital indication
Cabinet Size:	380 mm(W) x 95 mm(H) x 320 mm(D)
Weight:	Approx. 4.5 kg
Accessories Included:	1 — Aerial cable 1 — Infrared remote control handset 2 — Batteries 1 — Dust preventive socket cover

* Design and specifications are subject to change without notice.

SPECIFICATIONS [For VT-F450E(UKN)]

Format:	VHS PAL Standard
Recording:	Rotary Two-Head Helical Scan Azimuth Recording
Tape Speed:	23.39 mm/sec. — SP, 11.7mm/sec. — LP
Tape Width:	12.7 mm
Operation Temperature:	5°C to 40°C
Video:	PAL colour (system I) & CCIR monochrome signals 625 lines
Recording Time:	240 min. with E-240 cassette — SP 480 min. with E-240 cassette — LP
Aerial Input:	UHF channels 21 — 69
RF Output:	UHF channel 37 (32 — 42 adjustable) (System I)
Video Input:	0.5 to 1.5Vp-p 75 ohm Unbalanced
Video Output:	1Vp-p 75 ohm Unbalanced
S/N Ratio (Video):	More than 43 dB
Horizontal Resolution:	Colour 260 lines
Audio (Linear)	
Input:	PERI: – 3.8 dBm 10 Kohm, LINE: – 7.8 dBm 50 Kohm
Output:	PERI: – 3.8 dBm 1 Kohm, LINE: – 7.8 dBm 1 Kohm
S/N Ratio:	43 dB
Frequency Range:	70 Hz to 12 kHz
Hi-Fi Audio	
Frequency Range:	20 Hz to 20kHz
Dynamic Range:	More than 90dB
Wow and Flutter:	Less than 0.005% WRMS
Power:	AC 220V — 240V, 50 Hz
Power Consumption:	21W (including timer)
Timer:	24-hour digital indication
Cabinet Size:	380 mm(W) x 95 mm(H) x 320 mm(D)
Weight:	Approx. 4.5 kg
Accessories Included:	1 — Aerial cable 1 — Infrared remote control handset 2 — Batteries 1 — Dust preventive socket cover

* Design and specifications are subject to change without notice.

COMPARISON OF FEATURES (For VT-M430E)

	ITEM	VT-M430E	VT-M340E/M345E
GENERAL	VIDEO HEADS	DA4 Heads SP: 48μm LP: 24μm	DA4 Heads SP: 48μm LP: 24μm
	BASIC CHASSIS TYPE	AF	AF
	CAPSTAN DRIVE	DIRECT DRIVE	DIRECT DRIVE
	CYLINDER MOTOR	THREE-PHASE OUTER ROTOR: 360Hz	THREE-PHASE OUTER ROTOR: 360Hz
VIDEO	PAL COLOUR	B/G	B/G
	MESECAM COLOUR	NO	NO
TUNER	TUNING SYSTEM	F.S TUNING	F.S TUNING
	CATV	YES	YES
	CHANNEL PRESET No.	49CH	49CH
	RF CONVERTER	B/G	B/G
	RF CONV. CHANNEL (32-42)	37	37
TIMER	REC. PROGRAMME	8 PROG./1 YEAR	8 PROG./1 YEAR
	DIMMER	NO	NO
	IRT	LENGTH Only	LENGTH Only
	BACK-UP TIME	ABOUT 30 MIN.	ABOUT 30 MIN.
	PDC	YES (For PV) OPTION (For CT)	OPTION (For CT)
	VPS	YES (For PV) OPTION (For CT)	YES (For VPS) OPTION (For CT)
OTHER FEATURES	EASY EDIT	NO	NO
	VISS	YES(Play only)	YES
	TV/VCR CONTROL	YES	YES
	AUTO HEAD CLEANING	YES	YES
	MANUAL HEAD CLEANING	NO	NO
	EDIT IN/OUT JACK	YES	YES
	TAPE SPEED	SP/LP	SP/LP
	VIDEO DUB	NO	YES
	AUDIO DUB	NO	YES
	X2 PLAY	YES	YES
	SLOW/REV.SLOW PLAY	YES/YES	YES/YES
	F.ADV PLAY/REV.F.ADV PLAY	YES/YES	YES/YES
	LP SPECIAL EFFECT	YES	YES
	SHUTTLE RING/JOG	YES/NO	YES/YES
	AI PICTURE	NO	NO
	FRONT A/V INPUT JACK	YES	YES
	COUNTER GO-TO	YES	YES
AUTO FEATURES	AUTO TRACKING	YES	YES
	AUTO OPERATE ON	YES	YES
	AUTO PLAY	YES	YES
	AUTO EJECT	YES	YES
	AUTO REWIND	YES	YES
	AUTO REW.SHUT OFF	YES	YES
	AUTO TAPE CANCELLER	YES	YES
REMOTE CONTROL	PROGRAMME SETTING	LCD	LCD
	CLOCK SETTING	LCD	LCD
	VCR1/VCR2/TV	YES	YES
	PROGRAMME MEMORY	NO	NO
	VIDEO PLUS	YES	YES

COMPARISON OF FEATURES (For VT-F450E)

	ITEM	VT-F450E	VT-F360E/F365E
GENERAL	VIDEO HEADS	DA4 Heads + Hi-Fi SP: 48μm LP: 24μm Hi-Fi: 28μm	DA4 Heads + Hi-Fi SP: 48μm LP: 24μm Hi-Fi: 28μm
	BASIC CHASSIS TYPE	AF	AF
	CAPSTAN DRIVE	DIRECT DRIVE	DIRECT DRIVE
	CYLINDER MOTOR	THREE-PHASE OUTER ROTOR: 360Hz	THREE-PHASE OUTER ROTOR: 360Hz
VIDEO	PAL COLOUR	B/G (Except for UKN) I (For UKN)	B/G (Except for UKN) I (For UKN)
	MESECAM COLOUR	NO	NO
TUNER	TUNING SYSTEM	F.S TUNING	F.S TUNING
	CATV	YES (Except for UKN)	YES (Except for UKN)
	CHANNEL PRESET No.	49CH	49CH
	RF CONVERTER	B/G (Except for UKN) I (For UKN)	B/G (Except for UKN) I (For UKN)
	RF CONV. CHANNEL (32-42)	37	37
	A2	YES (For NA, VPS)	YES (For NA, VPS)
	UK NICAM	YES (For UKN)	YES (For UKN)
	CT NICAM	YES (For NA)	YES (For NA)
TIMER	REC. PROGRAMME	8 PROG./1 YEAR	8 PROG./1 YEAR
	DIMMER	NO	NO
	IRT	LENGTH Only	LENGTH Only
	BACK-UP TIME	ABOUT 30 MIN.	ABOUT 30 MIN.
	PDC	YES (For NA) OPTION (For UKN)	YES (For NA, VPS) OPTION (For UKN)
	VPS	OPTION (For NA, VPS)	OPTION (For NA, VPS)
OTHER FEATURES	PROGRAMME EDIT	NO	NO
	HEAD PHONE JACK	NO	NO
	AUTO HEAD CLEANING	YES	YES
	MANUAL HEAD CLEANING	NO	NO
	EDIT IN/OUT JACK	YES	YES
	TAPE SPEED	SP/LP	SP/LP
	VIDEO DUB	YES	YES
	AUDIO DUB	YES (MONAURAL)	YES (MONAURAL)
	X2 PLAY	YES	YES
	SLOW/REV.SLOW PLAY	YES	YES
	F.ADV PLAY	YES	YES
	LP SPECIAL EFFECT	YES	YES
	SHUTTLE RING/JOG	YES/NO	YES/YES (Except for UKN)
	AI PICTURE	NO	NO
	FRONT A/V INPUT JACK	YES	YES
	COUNTER GO-TO	YES	YES
AUTO FEATURES	AUTO TRACKING	YES	YES
	AUTO OPERATE ON	YES	YES
	AUTO PLAY	YES	YES
	AUTO EJECT	YES	YES
	AUTO REWIND	YES	YES
	AUTO REW.SHUT OFF	YES	YES
	AUTO TAPE CANCELLER	YES	YES
REMOTE CONTROL	PROGRAMME SETTING	LCD	LCD
	CLOCK SETTING	LCD	LCD
	VCR1/VCR2/TV	YES	YES
	PROGRAMME MEMORY	NO	NO
	VIDEO PLUS	YES	YES

COMPARISON OF MAIN CONTROL ICs [For VT-M430E]

ITEM	VT-M430E		VT-M340E/M345E	
VIDEO SYSTEM				
Y/CHROMA PROCESS	LA7439M	(IC201)	LA7439M	(IC201)
CCD DELAY	LC89973M	(IC202)	LC89973M	(IC202)
FM EQ	M52364P	(IC203)	M52364P	(IC203)
PRE/REC AMP				
VIDEO HEAD AMP	LA7415	(IC1102)	LA7415	(IC1102)
ON SCREEN DISPLAY				
CHARACTER GENERATOR	M35010-013SP	(IC1401)	M35010-013SP	(IC1401)
PLL H.SYNC GEN.	BA7046F	(IC1441)	BA7046F	(IC1441)
AUDIO				
AUDIO REC/PB PROCESS	LA7286	(IC401)	LA7286	(IC401)
SERVO				
SERVO CONTROL	HD49781AF	(IC601)	HD49781AF	(IC601)
FG AMP	NJM4558M	(IC651)	NJM4558M	(IC651)
SYSTEM CONTROL/TIMER				
SYSTEM CONTROL/TIMER μP	M38185ME-103 or 118FP	(IC901)	M38185ME-071FP	(IC901)
EA-ROM	ST24C01C	(IC903)	X24C16	(IC903)
TAPE LOADING DRIVE	XRA6209 or BA6209	(IC904)	XRA6209U4 or BA6209U4	(IC904)
PDC/VPS				
VPS DECODER	OPTION [For CT]		HES8052A [For VPS]	(IC2522)
PDC/VPS DECODER	SDA5649 [For PV]	(IC101)	———	
POWER SUPPLY				
SWITCHING DRIVER	STR-M6545	(IC851)	STR-M6545	(IC851)

COMPARISON OF MAIN CONTROL ICs [For VT-F450E]

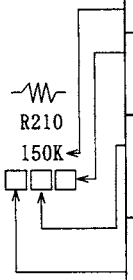
ITEM	VT-F450E		VT-F360E/F365E	
VIDEO SYSTEM				
Y/CHROMA PROCESS	LA7439M	(IC201)	LA7439M	(IC201)
CCD DELAY	LC89973M	(IC202)	LC89973M	(IC202)
FM EQ	M52364P	(IC203)	M52364P	(IC203)
PRE/REC AMP				
VIDEO HEAD AMP	LA7415	(IC1102)	LA7415	(IC1102)
AUDIO HEAD AMP	XRA7740S	(IC1101)	XRA7740S	(IC1101)
ON SCREEN DISPLAY				
CHARACTER GENERATOR	M35010-013SP	(IC1401)	M35010-013SP	(IC1401)
PLL H.SYNC GEN.	BA7046F	(IC1441)	BA7046A	(IC1441)
AUDIO				
FM AUDIO PROCESS	AN3961NFBPAA	(IC501)	AN3961NFBPAA	(IC501)
PB SW	BA7755	(IC401)	BA7755	(IC401)
SERVO				
SERVO CONTROL	HD49781AF	(IC601)	HD49781AF	(IC601)
FG AMP	NJM4558M	(IC651)	NJM4558M	(IC651)
SYSTEM CONTROL/TIMER				
SYSTEM CONTROL μP/TIMER μP	M38185ME-103 or 118FP	(IC901)	M38185ME-071FP	(IC901)
EA-ROM	ST24C01C	(IC903)	X24C16[Except for UKN]	(IC903)
			X24C01 [For UKN]	(IC903)
TAPE LOADING DRIVE	XRA6209 or BA6209	(IC904)	XRA6209U4 or BA6209U4	(IC904)
NICAM				
NICAM DECODER	SAA7283	(IC1801)	CF70091A	(IC1801)
D/A CONV.	———		TDA1543	(IC1802)
DUAL OPE. AMP	4558M	(IC1802)	BA4560	(IC1803)
SWITCH	———		BA3129FT	(IC1804)
ACTIVE FILTER	———		AFS816F	(IC1806)
PDC/VPS				
VPS DECODER	OPTION [For NA, VPS]		HES8052A	(IC2522)
PDC/VPS DECODER	SDA5649	(IC101)	———	
A2				
ST/DUAL SOUND PROCESSOR	TDA9840	(IC1851)	TDA9840	(IC1851)
FM DEMODULATOR	TDA9821	(IC1852)	TDA9821	(IC1852)
POWER SUPPLY				
SWITCHING DRIVER	STR-M6545	(IC851)	STR-M6545	(IC851)

WHEN USING THIS SERVICE REFERENCE MATERIAL

1. How to Read Abbreviations

Values, dielectric resistances (power capacitances), tolerances, grades of resistors (excluding variable resistors, etc.) and capacitors are indicated in the schematic diagrams using abbreviations. Collate these abbreviations and the following tables to read abbreviations and replace parts correctly.

[RESISTORS]

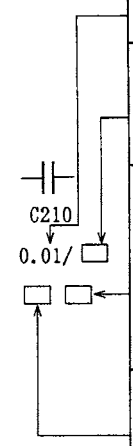


Value	No indication ····· ohm K ····· kohm
Tolerance	No indication ····· ± 5% K ····· ±10% M ····· ±20%
Power capacitance	No indication ····· 1/8W (All capacitances other than 1/8W are indicated in schematic diagrams with W omitted.)
Type	No indication ·· Carbon film fixed RC ····· Carbon solid RW ····· Power-type wire wound solid RS ····· Metal oxide film solid RN ····· Metal film solid

Example

R210
150K ····· 150 kohm, carbon solid
RC.1/2.K 1/2W, ±10%

[CAPACITORS]



Value	No indication ····· μF P ····· PF
Dielectric resistance	No indication ····· 50WV (All resistances other than 50WV and those of electrolytic capacitors are indicated with WV omitted.)
Tolerances	No indication ····· ±10% J ····· ± 5% M ····· ±20% C ····· ±0.25PF Z ····· +80%-20% (No indication for electrolytic capacitors. (excluding tantalum and high stability electrolytic capacitors.)
Type	No indication ··· Ceramic, general electrolytic (see circuit symbol to distinguish from ceramic.) MYL ····· Mylar (Polyester film) STY ····· Styrol TA ····· Tantalum KU ····· High stability electrolytic MP ····· Metallized paper

Example

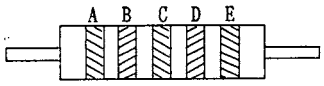
C210
0.01/25 ····· Mylar, 0.01μF, 25WV
MYL.J ±5%

2. Markings in Schematic and Circuit Board Diagrams

(1) Parts with marks "■" attached to circuit numbers in the schematic and circuit board diagrams are discrete components.
(2) Parts with marks "●" attached to circuit numbers in the schematic and circuit board diagrams are chip components.
(3) Parts with marks Ⓩ in the circuit board diagrams are leadless jumpers.

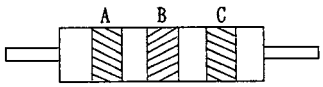
3. How to Read Capacitance of Resistance-Type Capacitors and Coils

[CAPACITOR]



CAPACITY : (10A+B)×C (PF)
TOLERANCE : D
RATED VOLTAGE : BODY COLOR
PINK : 25V
GREEN : 50V
CHARACTERISTICS : E

[COIL]



INDUCTANCE : (10A+B)×C (μH)

COLOR	A, B	C	D	E
Black	0	10^0	±20%	For temperature compensation
Brown	1	10^1		
Red	2	10^2		
Orange	3	10^3		
Yellow	4	10^4		
Green	5	10^5		
Blue	6			
Violet	7			
Gray	8		±30%	High dielectric constant type
White	9			For temperature compensation
Gold		10^{-1}	± 5%	
Silver		10^{-2}	±10%	High dielectric constant type

4. Cautions on Use of MOS ICs

(1) MOS ICs are inserted in black foam for shipment. This foam is a conductor which short-circuits between the leads to prevent damage. Do not remove ICs from this foam during storage. Avoid removing ICs from this foam, placing them on plastic which is likely to be charged with static electricity or inserting them into styrol foam.
(2) High voltages may be applied during soldering caused by leakages from the soldering iron. Be sure to ground the tip of the soldering iron or use a low voltage soldering iron.
(3) The human body and clothes made of synthetic fiber or nylon gloves may be charged with several thousand volts of static electricity because of friction. Workers should be grounded.

SERVICE MANUAL ABBREVIATION LIST

A	
ACC	Automatic Color Control
ACK	Automatic Color Killer
ADC B-Y	Analog to Digital Converted B-Y Signal
ADC R-Y	Analog to Digital Converted R-Y Signal
ADC Y	Analog to Digital Converted Luminance
ADD	Adder
ADRS	Address
A.DUB	Audio Dubbing
AF	Autofocus
AFC	Automatic Frequency Control
AGC	Automatic Gain Control
AGC KILLER	AGC Killer Voltage
ALC	Automatic Level Control
AIC	Automatic Iris Control
AM	Amplitude Modulation
AMP	Amplifier
APC	Automatic Phase Control
ASBL	Assemble (Phase Matching)
AUD.	Audio
AUX	Auxiliary
A5V	Always 5V B+ Source
B	
B (BLU)	Color Signal BLUE
BATT.	Battery
BF	Burst Flag
BG	Burst Gate or Back Ground
BGP	Burst Gate Pulse
BH	Power Supply for Selecting VHF High Band
BL	Power Supply for Selecting VHF Low Band
BLK	Blanking
BM	Power Supply for Selecting VHF Mid Band
BPF	Bandpass Filter
BS	Power Supply for Selecting VHF Super Band
BU	Power Supply for Selecting UHF Band
BU	Back-up
BUF.	Buffer Amplifier
B-YL	Battery
C	
C	Chroma
C (CHROMA)	Chrominance Signal
CAPST.	Capstan
CAS	Column Address Strobe
CARRI.	Carrier
CATV	Cable TV
C.BLANK	Chroma Blanking
C.BLK	Composite Blanking
CCD	Charge Coupled Device
CG	Character Generator
C.FG/CFG	Capstan Frequency Generater
C.FREE RUN	Chapstan Free Run
CH	Channel
CHD	Camera Horizontal Drive Pulse
CHAR.	Character
CHROMA	Chrominance
C.MEMORY	Counter Memory
CNR	Chroma Noise Reducer
COM.	Common
COM.	Composite
COMPA	Comparator
COMPE	Compensator
COMPO	Composite
COMP-EXP	Compressor-Expander
CONV.	Converter
CONT	Control
CORR.	Correlation
COUNT.	Counter
CP	Clamp Pulse
C.PAUSE	Camera Pause
C/R	Capacitor/Resistor
C.RESET	Counter Reset
C.REVERSE	Count Reverse
CST	Cassette

C	
C.SYNC	Composite Synchronizing Signal
CTL	Control Track Pulse (Control)
CYL	Cylinder
CY (CYAN)	Color Signal CYAN
D	
DA	Double Azimuth
D/A	Digital to Analog Converter
D-D	Direct Drive
DEEMPHA.	Deemphasis
DEF	Deflection
DEMOD.	Demodulator
DEMPX	Demultiplexer
DET	Detector
DIFF. AMP	Differential Amplifier
DISCRI.	Discriminator
DISP.	Display
DL	Delay Line
DN	Down
DO	Dropout
DOC	Dropout Compensator
DRAM	Dynamic Random Access Memory
D.REF 25/30	Delayed Reference 25/30Hz
D.SW 25/30	Delayed Switching 25/30Hz
DSP	Digital Signal Processor
DT/OE	Data Transfer/Output Enable
D/W	Dark/White
DWC	Delayed Write Clock
E	
EA-ROM	Electrically Alterable Read Only Memory
E-E	Electronic-to-Electronic
EMPHA.	Emphasis
EQ	Equalizer
EVF	Electronic Viewfinder
EXT.	External
F	
F.ADV	Frame Advance
F/V	Frequency-to-Voltage Converter
FB	Feed Back
FF	Flip Flop
F.FWD	Fast Forward
FG	Frequency Generator
FM	Frequency Modulation
FREQ.	Frequency
FRAME ADV	Frame Advance
Fsc	Color Sub Carrier Frequency
FWD	Forward
G	
GEN	Generator
GND	Ground
H	
H	Horizontal
HBF	Horizontal Burst Flag
HD	Horizontal Drive
Hi-Fi	High Fidelity
HLT	Halt
HPF	High-pass Filter
HPL	High-pass Limiter
HSS	Horizontal Sync. Separator
I	
IF	Intermediate Frequency
INC	Row Counter Increment
INDI.	Indicator
INT.	Internal
INV.	Inverter
I/O	In/Out (Input/Output)
IR	Infrared Rays
IRIS DET	Iris Detection
IRT	Instant Recording Timer
L	
LCD	Liquid Crystal Display
LIN.	Linear
LM	Loading Motor

L	
LNC	Line Noise Canceller
LOG	Logarithm
LP	Long Play
LP (H)	Long Play Signal (Active High)
LPF	Low-pass Filter
LUMA	Luminance
L/R	Left/Right
M	
MAN	Manual
M.BRAKE	Main Brake
M.CUT	Monitor Cut
MEM.	Memory
MEM ON	Memory ON
MEM SW	Memory Switch
MEM VIDEO	Memorized Video
MIX	Mixer
MMV	Monostable Multivibrator
MOD.	Modulator
MPX	Multiplex
MPX VIDEO	Multiplexed Video
M.STATE	Mechanism State
M.STOP	Memory Stop
MTS	Multi Channel Television Sound
N	
NEG	Negative
NFB	Negative Feed Back
NORM. or NOR.	Normal
NR	Noise Reduction
O	
OB	Optical Black
O/E	Odd/Even Field
OSC	Oscillator
OSD	On-Screen Display
P	
PB/PLAY	Playback
P.CONT	Power Control
PIF	Picture Intermediate Frequency
PG	Pulse Generator
P IN P	Picture in Picture
PIX MOVE	Picture Move
PLL	Phase Locked Loop
POS.	Positive
POWER CONT.	Power Control
PROG.	Program
PROTECT.	Protector
PWM	Pulse Width Modulation
R	
R (RED)	Color Signal RED
RAM	Random Access Memory
RAS	Row Address Strobe
RC	Reading Clock
RCC	Reading Clock Clear
RCR	Row Counter Reset
REC	Record
RECT.	Rectifier
REF	Reference
REF 25/30	Reference 25/30Hz from servo circuit
REG	Regulator
REL	Refresh Control
REW	Rewind
REV	Reverse
RF	Radio Frequency
RM	Reel Motor
ROM	Read Only Memory
R-YL	Color Difference Signal R-YL
S	
SAP	Second Audio Program
SAW	Sawtooth
SC	Serial Control
SC1 (0°)	3.58MHz Subcarrier Signal 1 (0-degree Phase Shifted)

S	
SC2 (90°)	3.58MHz Subcarrier Signal 2 (90-degree Phase Shifted)
SEP.	Separator
SG	Signal Generator
S/H	Sample and Hold
SIF	Sound Intermediate Frequency
SOL	Solenoid
SP	Standard Play
SP/LP	Standard Play/Long Play
S.REEL	Supply Reel Sensor
SRCH	Search
SRV	Servo
STABI.	Stabilizer
S.TRACK	Slow Tracking
STBY	Standby Mode
S-VHS	Super VHS
SW 15Hz	15Hz Head Switching Pulse
SW 25/30Hz	25/30Hz Head Switching Pulse
SYNC	Synchronizing signal
SYS.CON	System Control
T	
T (TELE)	Telephoto Angle
T.BRAKE	Take-up Brake
T/L	Tuner/Line
TP	Test Point
T.REEL	Take-up Reel Sensor
T.RESET	Timer Reset
TRS	Transfer
TμP	Timer Microprocessor
TU-μP	Tuning Microprocessor
U	
U/D	Up/Down
UNI.	Unified
V	
V (VERT)	Vertical
VAR	Variable
V.AGC	AGC Voltage
VCA	Voltage Controlled Amplitier
VCO	Voltage Controlled Oscillator
V.DRV	Vertical Drive Pulse
V.DUB	Video Dubbing
V/F	Voltage to Frequency Converter
VHS	Video Home System
VF	Focus Voltage
VOL.	Volume
V-REF	Voltage Reference
VP	Vertical Pulse
VSS	Vertical Sync. Separator
Vss	Voltage Super Source
VT	Tuning Voltage
VT-U	Tuning Voltage-UHF
VT-V	Tuning Voltage-VHF
VCXO	Voltage Controlled Crystal Oscillator
W	
WC	Write Clock
WCC	Write Clock Clear
WE	Weighting
WHT	Color Signal WHITE
WIDE	Wide Angle
WHD	Wide Horizontal Drive
WHT BAL CONT.	White Balance Control
Y	
Y	Luminance Signal
Y/C	Luminance/Chrominance
YE (YEL)	Color Singal YELLOW
YL	Luminance Signal (Low Component)
ANOTHER	
μP	Microprocessor
5V	ON 5V B+ Source
9V	ON 9V B+ Source

LEADLESS (CHIP) COMPONENT IDENTIFICATION

1. Leadless Transistor

The part name of a leadless transistor is indicated by a code on its surface, using one letter, one letter and one numeral, two letters, two letters and one numeral, two numerals, two numerals and one letter, three letters, or four letters.

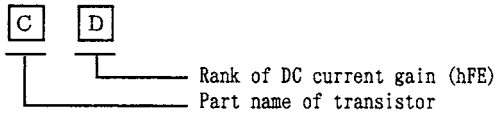
Note: There are transistors with the same code but diffrent part names, or with the same part name but different codes. Refer to the parts lists to finally identify a transistor.

CODE	PART NAME	CODE	PART NAME
Leadless (Chip) Transistor			
3925	2SC3925	BR	2SC2412K
1CQ	2SB902	BR	2SC4617
1D	2SC3127	BS	2SC2412K
1DS	2SD1328S	C-7	2SA811
1DT	2SD1328	C1G	KSC1623
1R	2SB970TX	CB	2SC3646
2BQ	2SK374PQ	CC	2SA1122C
2BR	2SK374QR	CC	2SC3647T
2Y	2SC3757	CC	2SC3647
2YQ	2SC4691	CD	2SA1122D
3N	2SK620	CE	2SA1122E
4N	XN5601	CK	2SD999
4Q	XN1B301	CP	2SC4097
4R	XN1C301	CQ	2SC2411K
5C	XN4601	CR	2SB710
5C	XP4601	CR	2SC2411
5H	XP4501	CR	2SB1219
5H	XN4501	D16	2SC1622A
5K	XP4401	D17	2SC1622A
5K	XN4401	D18	2SC1622A
5L	XN5501	DB	2SD1766
5N	XN6501	DE	2SC2463
5O	XN6401	DF	2SD1623
5R	XP1501	DF	2SD1898
5R	XN1501	DG	2SD1624
5S	XN1504	DK	2SB798
5V	XN1401	EC	2SA1022
5W	XN2501	F-2	2SC1009F2
5X	XN4504	F-3	2SC1009F3
7R	XN2401	F-4	2SC1009F4
7S	XN1601	FC	2SC2619
AA	2SD1757K	FR	2SA1774
AKQ	2SA1738	FR	2SA1037K
AKQ	2SA1806	FR	2SA1576R
AL	2SA1791	FS	2SA1037K
AM	2SC4656	GC	2SC2734
AO	2SB709AQR	GM	3SD1615
AQ	2SB709AQ	HQ	2SA1036K
AQ	2SB766	IC	2SC3016
AR	2SB1462	IRD	2SA1484
AR	2SB766	IS	2SB792S
AR	2SB709ARS	IT	2SB792T
AR	ASB1218R	L-4	2SC1623L4
AS	2SB766	L-5	2SC1623L5
AS	2SB709AS	L-6	2SC1623L6
B3	2SC1621B3	L-6	2SC2812L6
B4	2SC1621B4	L-7	2SC2812L7
BC	2SB1188	L5	MMBC1623L5
BD	2SB1121	L6	MMBC1623L6
BE	2SB1260	LB	2SC2462B
BF	2SB1123	LC	2SC2462C
BF	2SB1308	LD	2SC2462D
BG	2SB1124	LR	2SC2412KLN
BH	2SB1001	M-5	2SA812
BQ	2SB709A	M-6	2SA1179
BR	2SC4081R	MC	2SA1052MC

CODE	PART NAME	CODE	PART NAME
Leadless (Chip) Transistor			
MD	2SA1052MC-D	ZS	2SD874S
N3	2SC1653	VR	2SD968A
ND	2SD1306ND	W1	FMW1
NE	2SD1306NE	W10	FMW10
PD	2SA1171D	W2	FMW2
PS	2SD814	W3	FMW3
QB	2SC2620QB	WR	2SD602
QC	2SC2620QC	X1	UMX1
QO	2SC2714	X1	IMX1
R22	2SC4226	X2	IMX2
R22	2SC3356	Y1	FMY1
R32	2SC4227	Y12	2SA1464
R34	2SC3583	Y25	NTM3906
R42	2SC3585	Y3	FMY3
RB	2SC2618RB	YCD	2SK197
RC	2SC2618RC	YI	2SA1666
RK	2SC3357	YQ	2SD601YQ
S1	FMS1	YR	2SD601YR
S2	FMS2	YR	2SD1819R
SC	2SA1121	YR	2SD2216
SO	2SA1162	YS	2SD601YS
SP	2SC3082K	Z1	IMZ1
T1	IMT1	Z2	IMZ2
T1	UMT1	ZO	2SD874T
T2	IMT2	ZQ	2SD601A
UD	2SC2404	ZR	2SD874R
Digital Transistor			
3	DTC143TK	6C	UN9113
4	DTC114TK	6S	XP4113
6	DTC144TK	8B	UN5212
13	DTA143EK	8C	UN9213
14	DTA144EK	8C	UN2213
15	DTA124K	8S	XP4213
15	DTA124EU	9L	XP1213
16	DTA144EU	9L	XN1213
16	XDA144EK	A1	FMA1
16	DTA144EE	A1	UMA1
23	DTC143EK	A2	FMA2
24	DTC114EU	B2	UMB2
24	DTC144EK	B2	IMB2
25	DTC124EU	C2	FMC2
25	DTC124K	C5	FMC5
26	DTC144EE	D2	IMD2
26	DTC144EU	F52	DTB123
26	XDC144EK	G1	FMG1
33	DTA143XK	G2	FMG2
43	DTC143XK	G21	DTD113ZK
52	DTA123YK	G5	FMG5
60	UN511F	HO3	DTC343TK
64	DTC114YK	H2	IMH2
80	UN521F	H2	UNH2
4P	XN1A312T	H27	DTC363EK
6B	UN5112	RO4	KSR1104
6C	UN2113	R31	FP1L2Q
FET			
30	2SK621	WS	2SK322T
1FQ	2SK321FQ	WT	2SK322T
1FR	2SK321FQR	X15	2SK425
1KP	2SK316	X4	2SK94
2BQ	2SK663	XAF	2SK980FG
DY	2SK1579	YC	2SK197YC
JO	2SK208	YD	2SK197YD
K	3SK166	YE	2SK197YE
K4	2SK160K4	ZD	2SK217ZD
K5	2SK160K5	ZE	2SK217ZE
KB	2SK323		

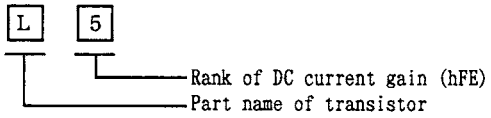
(1) **Identification with two letters**
Use this code and the following chart for transistor identification.
Example :

Code	Part name
CD	2SA1122D
LD	2SC2462D



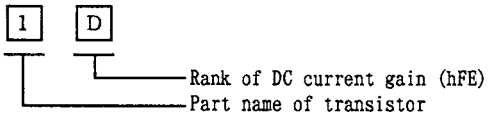
(2) **Identification with one letter and one numeral**
Use this code and the following chart for transistor identification.
Example :

Code	Part name
L5	2SC1623(5)
L6	2SC1623(6)



Example :

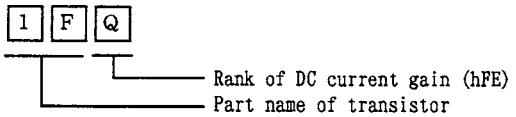
Code	Part name
1D	2SC3127D



Note: Codes S1,S2,T1,W1,W2,W3,X1,Y1,Y3,Z1 and Z2 encode only the part names.

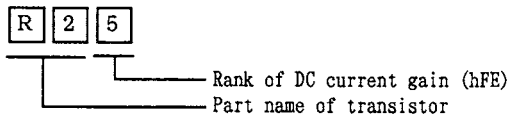
(3) **Identification with one numeral and two letters**
Use this code and the following chart for tarnsistor identification.
Example :

Code	Part name
1FQ	2SK321Q



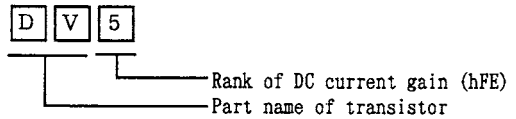
(4) **Identification with one letter and two numerals**
Use this code and the following chart for transistor identificaion.
Example :

Code	Part name
R25	25C3356



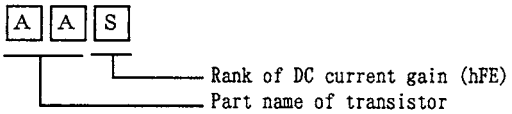
(5) **Identification with to letters and one numeral**
Use this code and the following chart for transistor identification.
Example :

Code	Part name
DV5	2SD596



(6) **Identification with three letters**
Use this code and the following chart for transistor identification.
Example :

Code	Part name
AAS	2SD1757KS



2. Leadless Diode
The part name of a leadless diode is indicated by a code on the surface, using one letter and one numeral, two letters, two letters and one numeral, two numerals and one letter, or three numerals. Use this code and the following table to identify the part name of a diode.

Note: Refer to the parts lists to finally identify a diode.

CODE	PART NAME	CODE	PART NAME
Diode			
0	HVU300A	3D	RB715F
1.0	1SV201	3.0L	MA3030L
2.0	MA3020	3.6L	MA3036L
5.1	MA3051L	3.9L	MA3039L
5.1	MA3051M	4.3H	MA3043H
6.8	MA3068	4.3L	MA3043L
6.8	MA3068M	4.3M	MA3043M
7.5	MA3075L	4.7L	MA3047L
8.2	MA3082M	4.7M	MA3047M
9.1	MA3091	5.1H	MA3051H
20	HZM6	5.1L	MA3051L
24	1SV221	5.1M	MA3051M
27	RD2.7M B	5.6M	MA3056M
30	RD3.0M B	6.2L	MA3062L
51	RD5.1M B2	6.2M	MA3062M
56	RD5.6M B	6.8H	MA3068H
91	RD9.1M B	6.8L	MA3068L
102	RD10M B2	6.8M	MA3068M
122	RD12M B2	6.8M	MA3068
163	RD16M B3	7.5H	MA3075H
182	RD10M B2	7.5L	MA3075L
271	RD2.7M B	8A	UN221D
272	D2.7M B2	8.2H	MA3082H
301	RD3.0M B	8.2M	MA3082M
362	D3.6M B2	9.1M	MA3091M
391	D3.9M B1	9.1M	MA3091
512	RD5.1M B2	10L	MA3100L
561	RD5.6M B	10M	MA3100M
621	RD6.2M B1	11L	MA3110L
681	RD6.8M	12M	MA3120M
683	RD6.8M B3	13H	MA3130H
911	RD9.1M B	18M	MA3180M
2.7H	MA3027H	36M	MA3360
Zener Diode			
1A	MA110	M3A	MA199
A3	1S2835	MC	MA153
A4	HSM2836C	MC	MA143
A5	1S2837	MH	MA141K
A6	HSM2838C	MH	MA151K

CODE	PART NAME	CODE	PART NAME
Zener Diode			
B	SB0505CP	MH	MA152K
B64	SFPB64	MI	MA132K
B74	SFPB74	MN	MA141WA
BE	1SV172	MN	MA152WK
C1	HSM88S	MN	MA151WA
C2	HSM276S	MO	MA132WA
C3	1SS226	MO	MA152WA
C4	HSM88WK	MP	MA133
F7	KV1470	MT	MA151WK
H5	HVM14	MT	MA141WK
J	SB07-03C	MU	MA132WK
K	DA221	MU	MA151WA
M1A	MA159	N	DAN222
M1C	MA158	N	DAN202T
M1M	MA721	NU	MA152WK
M1N	MA713DAT	P	DAP202T
M1P	MA714	S4	D1FS4
M2A	MA122	SA	SB10-05P
M2B	MA123	Z	DA106K

3. Leadless Resistor

The resistor value is indicated on its surface, using three numerals, or one letter and one numeral.

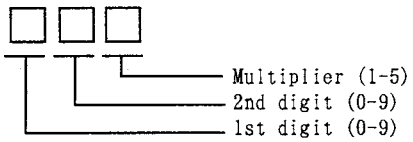
(1) Identification with three numerals

Read this code following the same procedure as when reading the color code on discrete resistors.

Example :

code	value
330	33 X 10^0 = 33 ohms
561	56 X 10^1 = 560 ohms
123	12 X 10^3 = 12K ohms
1R2	1 + 0.2 = 1.2 ohms

(R : Decimal point)



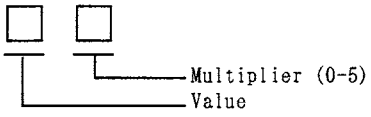
(2) Identification with one letter and one numeral

Use this code and the following chart for resisitor identification.

Letter	Value	Letter	Value	Letter	Value
A	1	J	2.2	S	4.7
C	1.2	L	2.7	U	5.6
E	1.5	N	3.3	W	6.8
G	1.8	Q	3.9	Y	8.2

Example :

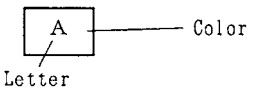
code	value
A1	1 X 10^1 = 10 ohms
G2	1.8 X 10^2 = 180 ohms
L3	2.7 X 10^3 = 2700 ohms
S4	4.7 X 10^4 = 47K ohms
W5	6.8 X 10^5 = 680K ohms



4. Leadless Capacitors

The capacitor value is indicated on its surface, using body color and one letter, or one letter and one numeral.

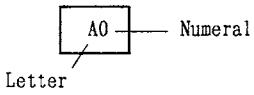
(1) Identification with body color and one letter



Body Color	Letter	Value	Body Color	Letter	Value
Red	A	1(PF)	Blue	A	100(PF)
	C	2		C	120
	E	3		E	150
	G	4		G	180
	J	5		J	220
	L	6		L	270
	N	7		N	330
	Q	8		Q	390
	S	9		S	470
Black	A	10(PF)		U	560
	C	12		W	680
	E	15		Y	820
	G	18	White	A	0.001(μF)
	J	22		E	0.0015
	L	27		J	0.0022
	N	33		L	0.0027
	Q	39		N	0.0033
	S	47		S	0.0047
	U	56		W	0.0068
	W	68	Green	A	0.01(μF)
	Y	82		E	0.015
				J	0.022
				N	0.033
				S	0.047
				U	0.056
				W	0.068
				Y	0.082
			Yellow	A	0.1(μF)

Example : Color	Letter	Value
Red	A	1PF
Black	A	10PF

(2) Identification with one letter and one numeral

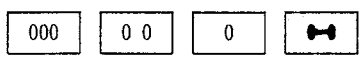


Letter/Numeral	Value	Letter/Numeral	Value
A0	1(PF)	A2	100(PF)
H0	2	C2	120
M0	3	E2	150
d0	4	G2	180
f0	5	J2	220
m0	6	L2	270
n0	7	N2	330
t0	8	Q2	390
y0	9	S2	470
A1	10(PF)	U2	560
C1	12	W2	680
E1	15	Y2	820
G1	18	A3	0.001(μF)
J1	22	E3	0.0015
L1	27	J3	0.0022
N1	33	N3	0.0033
Q1	39	S3	0.0047
S1	47	W3	0.0068
U1	56	A4	0.01(μF)
W1	68	E4	0.015
Y1	82	J4	0.022
		N4	0.033
		S4	0.047
		U4	0.056
		W4	0.068
		A5	0.1

Example : Letter/Numeral	Value
A0	1PF
A1	10PF

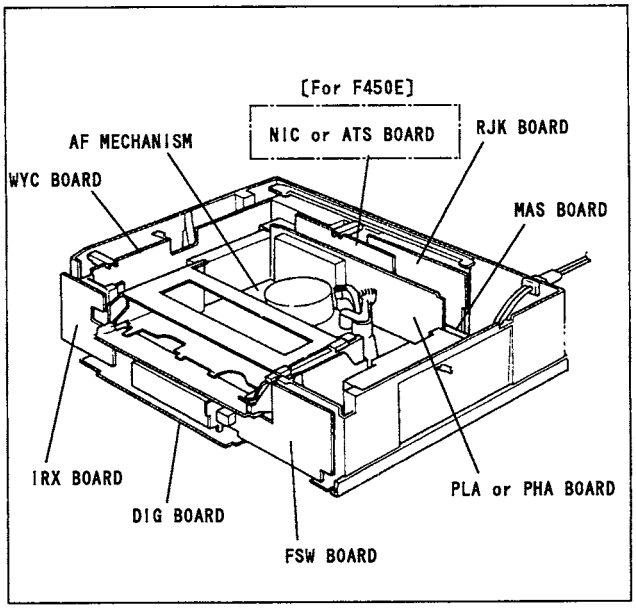
5. Leadless Jumper

The leadless jumper is indicated as shown below.

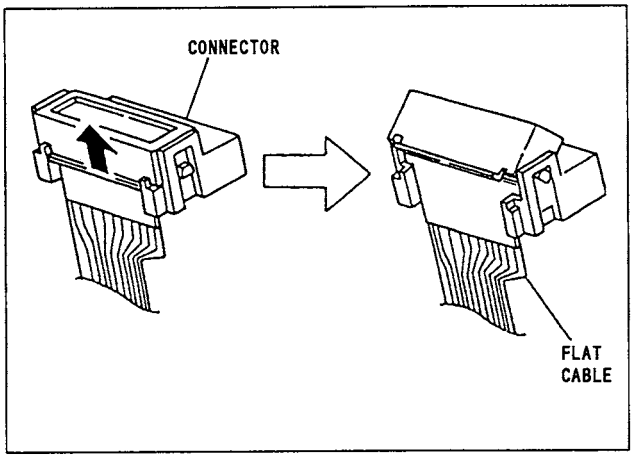


DISASSEMBLY

1. NAMES AND LOCATIONS OF CIRCUIT BOARDS



NOTE:
Be sure not to disconnect a flat cable forcibly or touch the exposed terminals of the connector by hand; it could result in defective contact. To disconnect a flat cable, pull the connector in the direction of the arrow and pull out the cable. Reconnect the flat cable by the reverse procedure to disconnecting.



2. TABLE OF PROCEDURE TO REMOVE COMPONENTS

The numbers in the table below correspond to those in the disassembly procedure diagrams on pages 2-2 and 2-4. Remove each component following the order of the numbers.

- Caution when reinstalling the front panel.

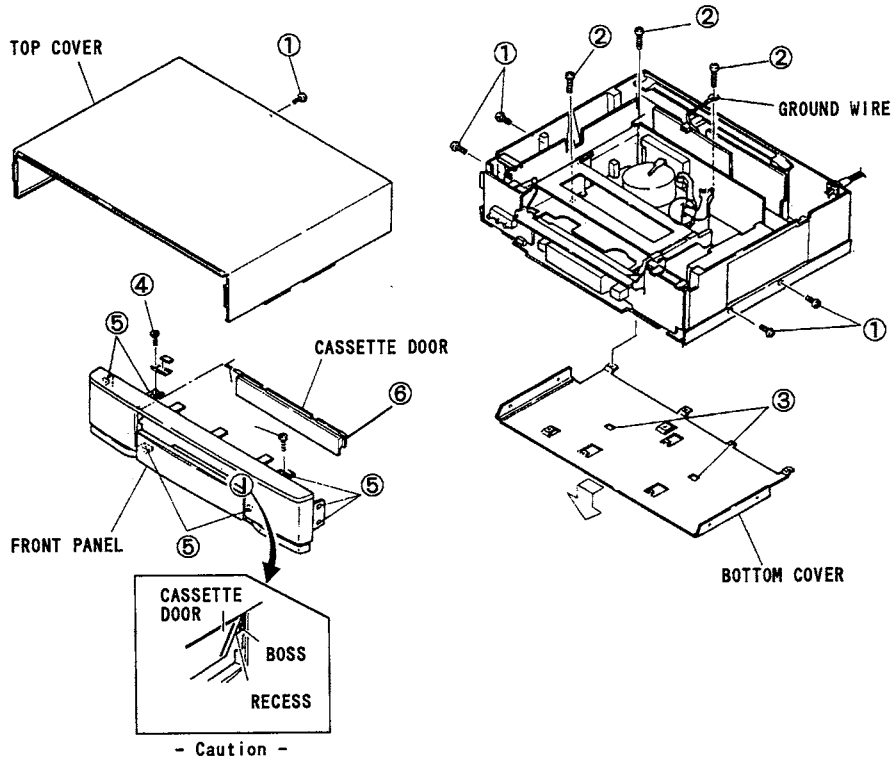
  Reinstall the front panel while the cassette door is pushed in halfway so that the boss of door actuating arm can be positively engaged with the recess on the side of the door as shown in Fig.1.

Table. 1

Item	Top cover	Bottom cover	Front panel	Cassette door			How to Remove
Removal Procedure and Sequence	①	① ⇩ ② ⇩ ③	① ⇩ ④ ⇩ ⑤	① ⇩ ④ ⇩ ⑤ ⇩ ⑥			1. Remove five screws and lift it up. 2. Remove three screws. 3. Release two stoppers and pull it out. 4. Remove two screws. 5. Release seven* stoppers and pull out the entire panel. *:eight (UKN only) 6. Tilt the cassette door and release the linked section.
	Refer to Fig. 1						

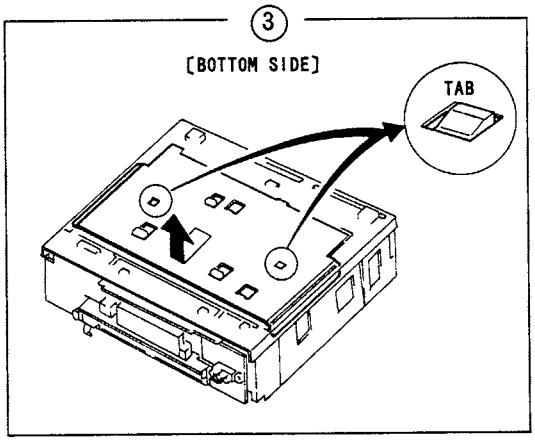
DISASSEMBLY PROCEDURE DIAGRAM

① – ⑥



Detailed Diagrams

③



⑥

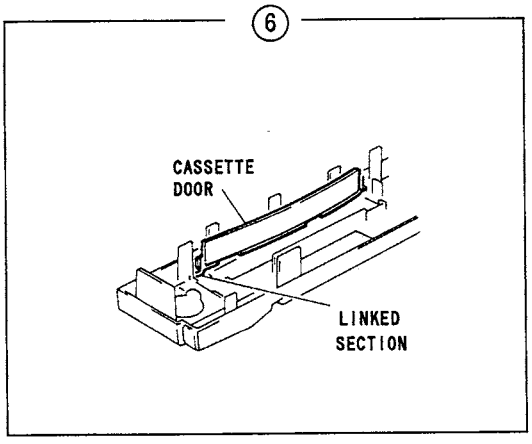


Fig. 1

Table. 2

Item	PLA PHA board	WYC board	ATS NIC board	FSW board	IRX board	DIG board	How to Remove
Removal Procedure and Sequence	① ⇩ ⑦ ⇩ ⑧	① ⇩ ⑦ ⇩ ⑨	① ⇩ ⑦ ⇩ ⑩	① ⇩ ④ ⇩ ⑤ ⇩ ⑪	① ⇩ ④ ⇩ ⑤ ⇩ ⑫	① ⇩ ④ ⇩ ⑤ ⇩ ⑬	1. Remove five screws and lift it up. 4. Remove two screws. 5. Release seven* stoppers and pull out the entire panel. *:eight(UKN only) 7. Remove screw and release the frame holder. 8. Remove two screws and lift it up. 9. Remove screw and lift it up. 10. Remove screw and lift it up. 11. Release three tabs. 12. Release two tabs. 13. Disconnect three connectors and pull it out.
	Refer to Fig. 2			Refer to Fig. 3			

Table. 3

◆ Before Starting work
Remove the components shown in items (①→④→⑤→⑦→⑧) of Table 2 in advance.

Item	AF Mechanism	MAS board	Rear panel	RJK board			How to Remove
	⑧						8. Remove two screws and lift it up.
Removal Procedure and Sequence	⇩ ⑭ ⇩ ⑮	⇩ ⑭ ⇩ ⑮ ⇩ ⑯ ⇩ ⑰ ⇩ ⑱	⇩ ⑭ ⇩ ⑮ ⇩ ⑯ ⇩ ⑰ ⇩ ⑱ ⇩ ⑲	⇩ ⑭ ⇩ ⑮ ⇩ ⑯ ⇩ ⑰ ⇩ ⑱ ⇩ ⑲			14. Remove screw holding the ground wire. 15. Remove five screws and release three chassis holder. 16. Remove four screws and release the ground wire. 17. Release the AC plug. 18. Release two tabs and lift it up. 19. Remove five screws holding the rear panel.
	Refer to Fig. 3						

DISASSEMBLY PROCEDURE DIAGRAMS

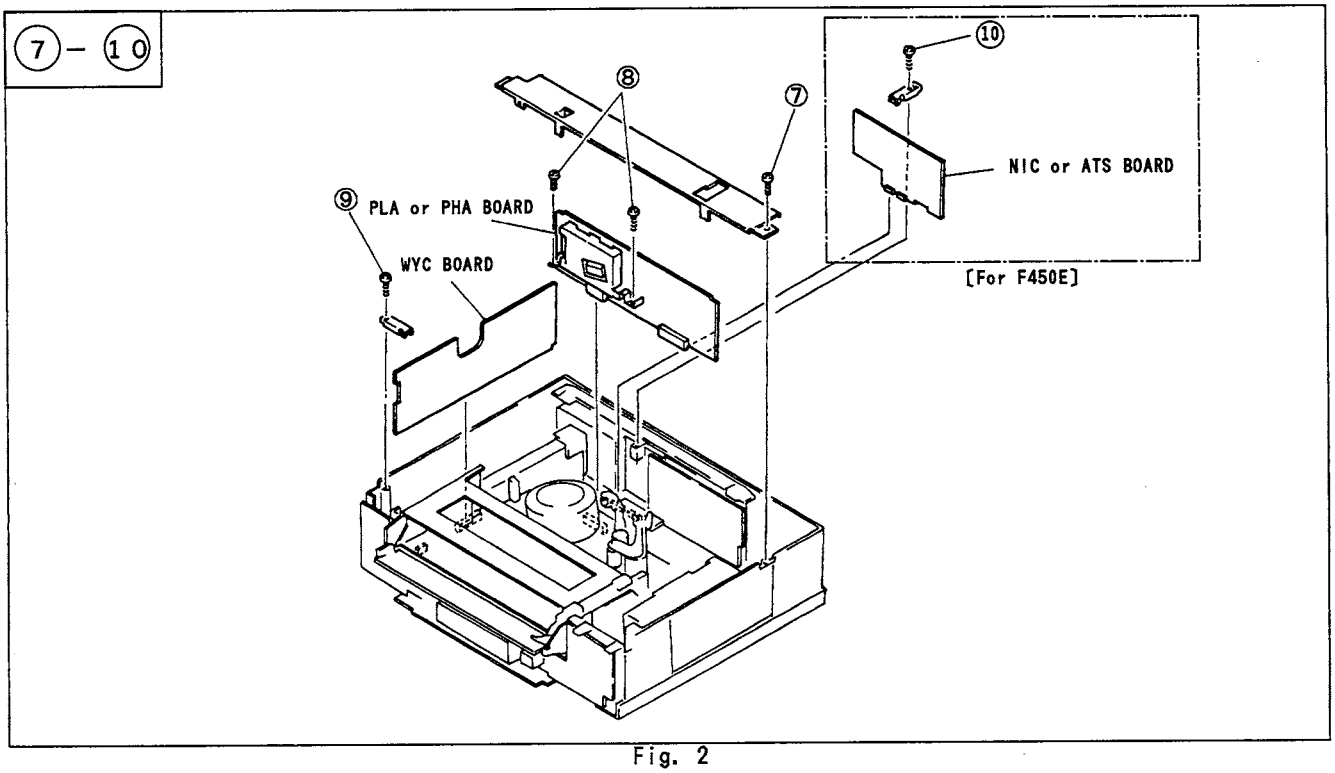


Fig. 2

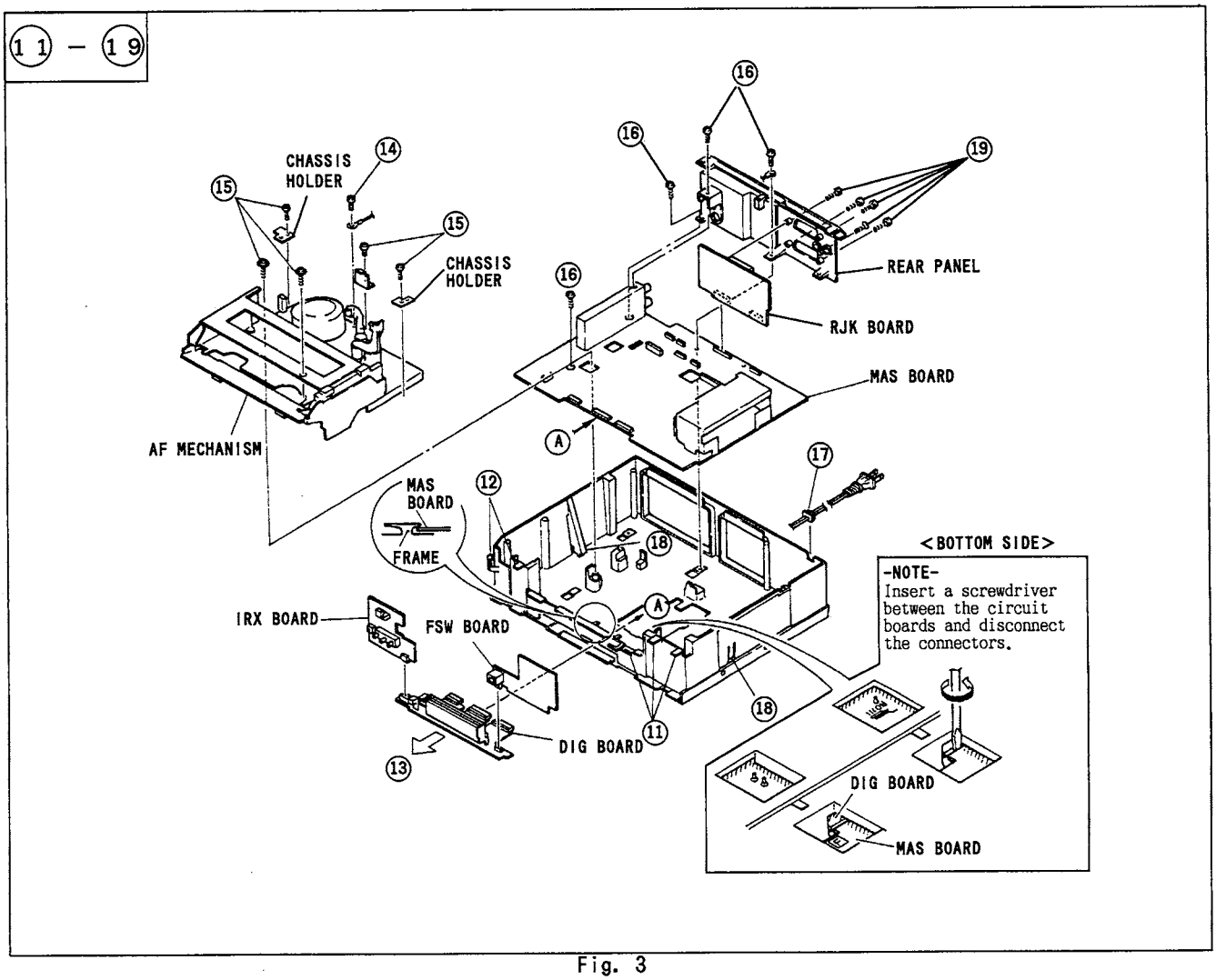


Fig. 3

SERVICE POSITION

This VCR can be adjusted from the top when the top cover and front panel are removed.

1. SERVICING POSITION FOR ELECTRICAL ADJUSTMENT (Fig. 1)

1) Remove the top cover.
2) Remove the front panel.

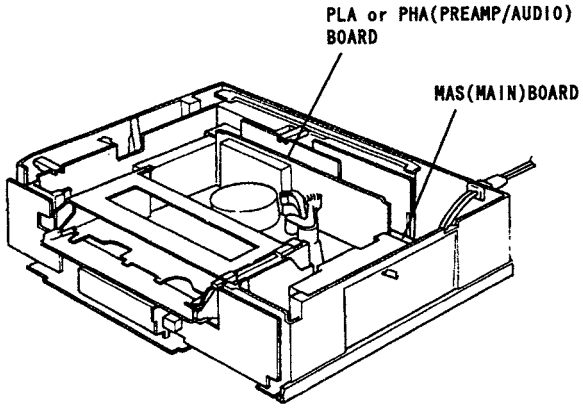


Fig. 1

2. SETTING FOR SERVICE POSITION

This VCR has a structure that part of the main circuit board is not seen under the loading mechanism block. When servicing, set the VCR to the following servicing positions according to the positions to be checked.

① When checking the pins of the main IC and system control microprocessor (Fig. 2)

1) Remove the bottom cover.
2) Check the pins of the main IC through the hole in the frame.

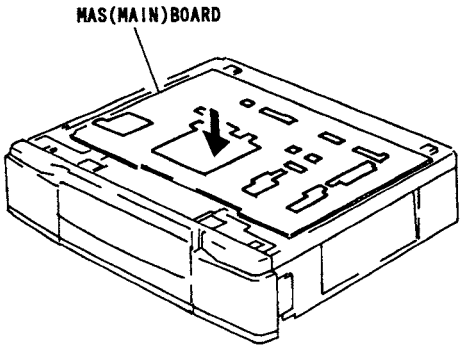


Fig. 2

② When checking the operation of the mechanism block from the bottom (Fig. 3)

Caution :
The playback FM signal cannot be checked with this servicing position.

1) Remove the top cover and front panel.
2) Remove screw (A) and then the frame holder.
3) Remove the PLA or PHA (Preamp/Audio) circuit board.
4) Remove five (5) screws (B) and lift the mechanism block.
5) Turn over the frame holder and insert it into the hole in the frame.
6) The mechanism block can be opened up 90° in this state.

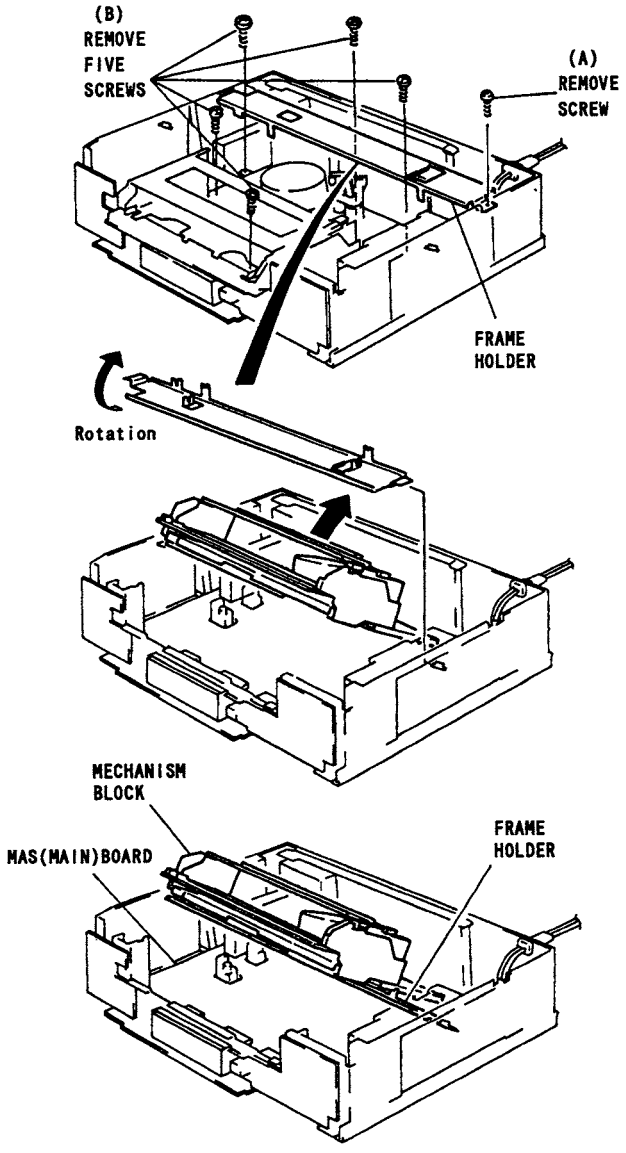


Fig. 3

③. WHEN CHECKING THE SIGNAL LINE WHILE OPERATING THE MECHANISM (Figs. 4 and 5)

◆ Setting procedure

1) Remove the top cover and front panel.
2) Remove screw (A) and then the frame holder.
3) Remove five (5) screws (B) and lift the mechanism block and PLA or PHA (Preamp/Audio) circuit board together.
   Be careful that the connectors between the mechanism block and PLA/PHA and MAS circuit boards are not disconnected.
4) Connect the extension cables.
   - For VT-M430E -
   Connect the two 18-pin extension cables between the direct connectors of the PLA and MAS circuit boards.
   - For VT-F450E -
   Connect the 18-pin and 28-pin extension cables between the direct connectors of the PHA and MAS circuit boards.
5) Connect the 5-pin and 12-pin and 10-pin extension cables between the WYC and MAS circuit boards.
6) Connect the 8-pin connector between the cylinder motor and MAS circuit board.
7) Connect the 7-pin connector between the capstan motor and MAS circuit board.

◆ Prepare jigs

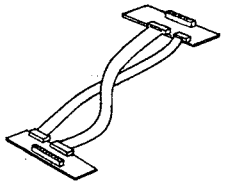
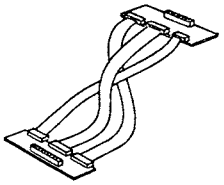
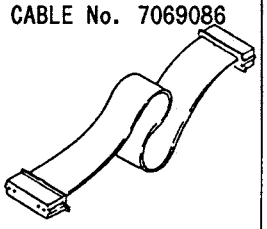
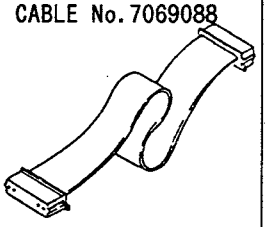
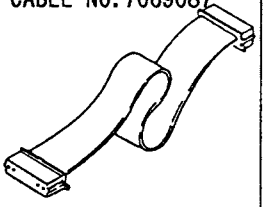
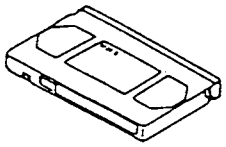
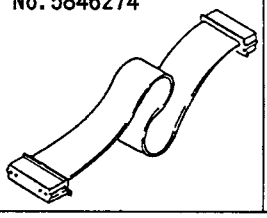
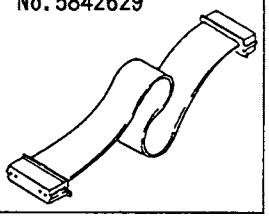
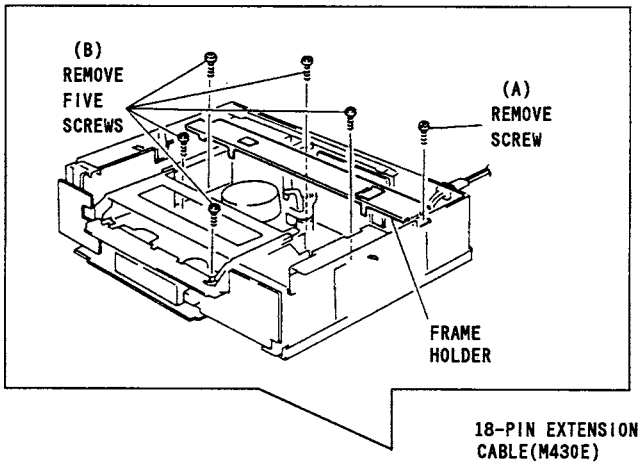
1. 18-PIN EXTENSION CABLE No. 7069077 	2. 28-PIN EXTENSION CABLE No. 7069078 
3. 5-PIN EXTENSION CABLE No. 7069086 	4. 12-PIN EXTENSION CABLE No.7069088 
5. 10-PIN EXTENSION CABLE No.7069087 	6. MH-2 Alignment Tape [For PAL]No.7099052 
7. 8-PIN CONNECTOR No.5846274 	8. 7-PIN CONNECTOR No.5842629 

Fig. 4



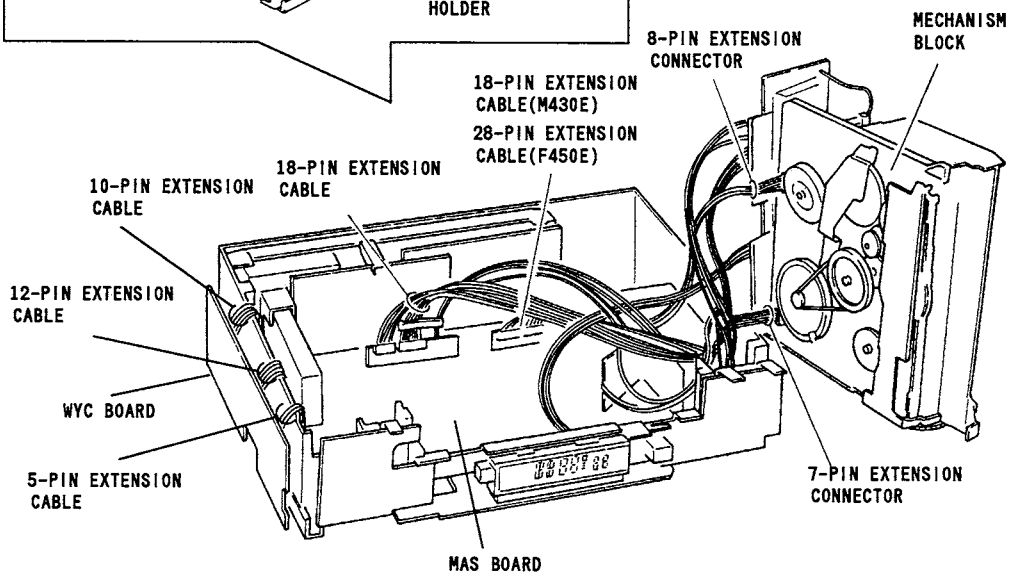


Fig. 5

ELECTRIC CIRCUIT ADJUSTMENT

Test equipment and tapes necessary for adjustment

1) Dual-trace oscilloscope
2) Colour bar generator
3) VTVM
4) DC voltmeter
5) Frequency counter
6) Monitor TV (with Euro Socket)
7) Alignment tape
   - MH-2 : Parts No. 7099052
8) Blank tape

Cautions on adjustments

1) If there are no special instructions, the following conditions apply.
   - Oscilloscope probe: 10:1
   - Oscilloscope synchronization: Internal sync
   - Ground of test equipment: TPG001-3 (GND) on MAS board
   - Tracking control: Electrical centre (Press the TRACKING UP (▲) and DOWN (▼) buttons simultaneously to set tracking to the centre.)
   - Slow tracking control: Electrical centre (Unplug the mains lead from the AC outlet)
2) When making more than one adjustment, perform the adjustments in the order listed.
3) Be sure to perform the following adjustment after replacing IC903 (EAROM) on the main circuit board.
   - Forward Slow Tracking Preset
   - Reverse Slow Tracking Preset

USABLE SERVICING METHODS

1. TO RESET THE MICROPROCESSOR
   The microprocessor used in this unit can be reset by pressing switch (S701) on the FSW circuit board.

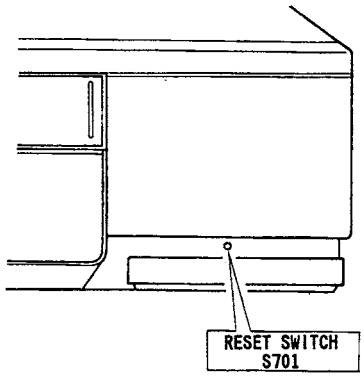


Fig. 6

2. TO SET THE VCR TO THE LOADING STATE WITHOUT LOADING A CASSETTE
   1) Unplug the power cord from the AC outlet.
   2) Cover the supply and take-up end sensors (sections A in the figure below) with black masking tape, etc. to shut off the light.
   3) Plug the power cord into an AC outlet.
   4) Turn the VCR on.
      The VCR can accept the inputs of each mode in this state. However, the rewind operation cannot be performed for more than a few seconds because the take-up reel disk is in the stop state and reel pulses cannot be detected.

[Cautions]

Always return the VCR to the original state in the following order after the above operations have been completed.

1) Remove the masking tape, etc. from the supply and take-up end sensors.
2) Unplug the power cord from the AC outlet once to reset the system control microprocessor.

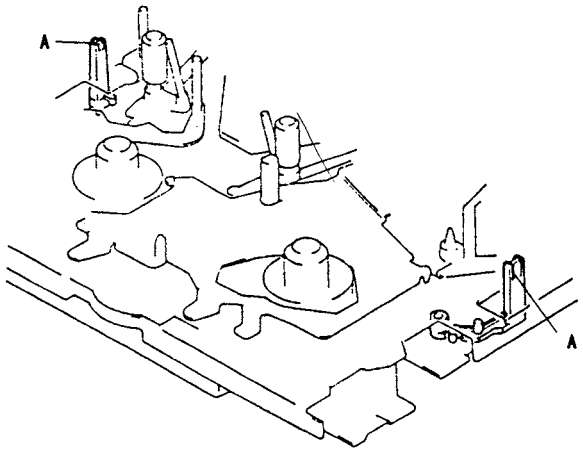
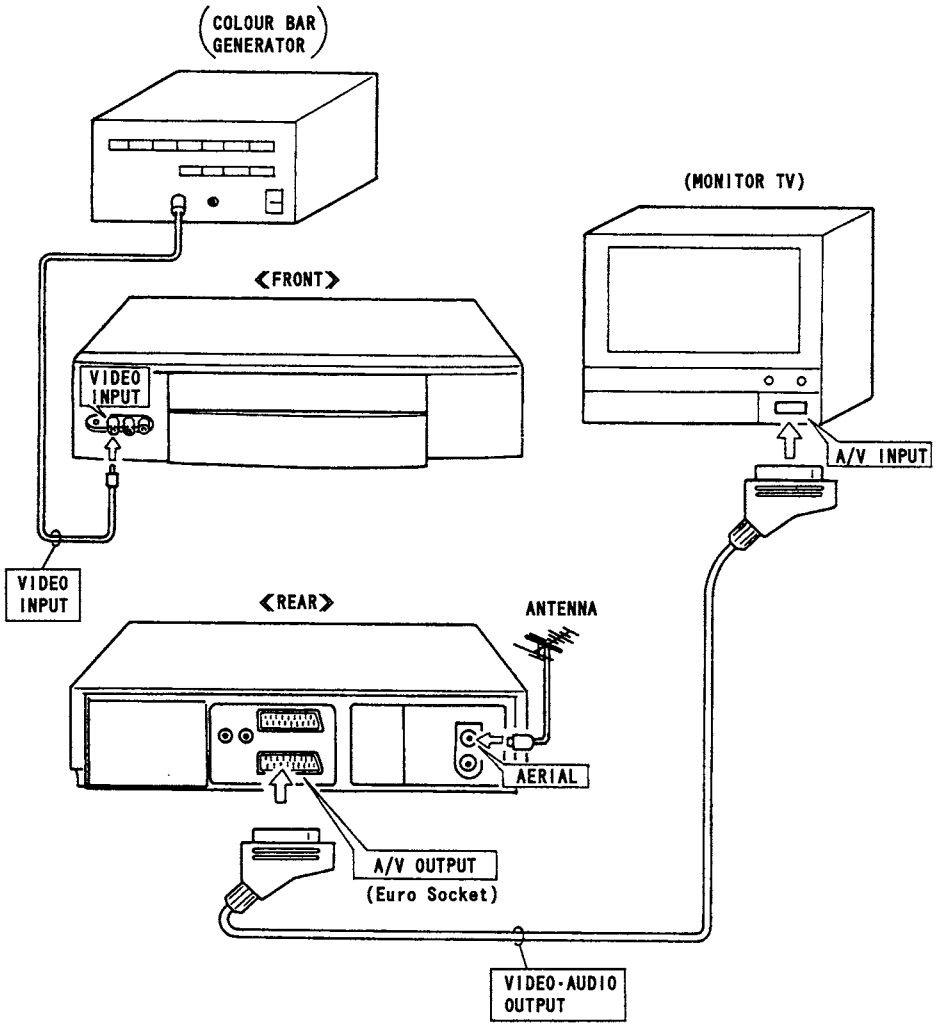


Fig. 7

CONNECTION FOR TEST EQUIPMENT

Connect the test equipment as shown in the diagram below when otherwise not specified in the following text.

1) Connect a colour bar generator to the video input jack of the VCR.
2) Connect a monitor TV to the Euro Socket of the VCR.
3) Connect an antenna to the AERIAL in jack and receive a TV broadcast.



・VCR setting condition
1) Set to the external input mode.

Fig. 8

Adjustment Parts Locations

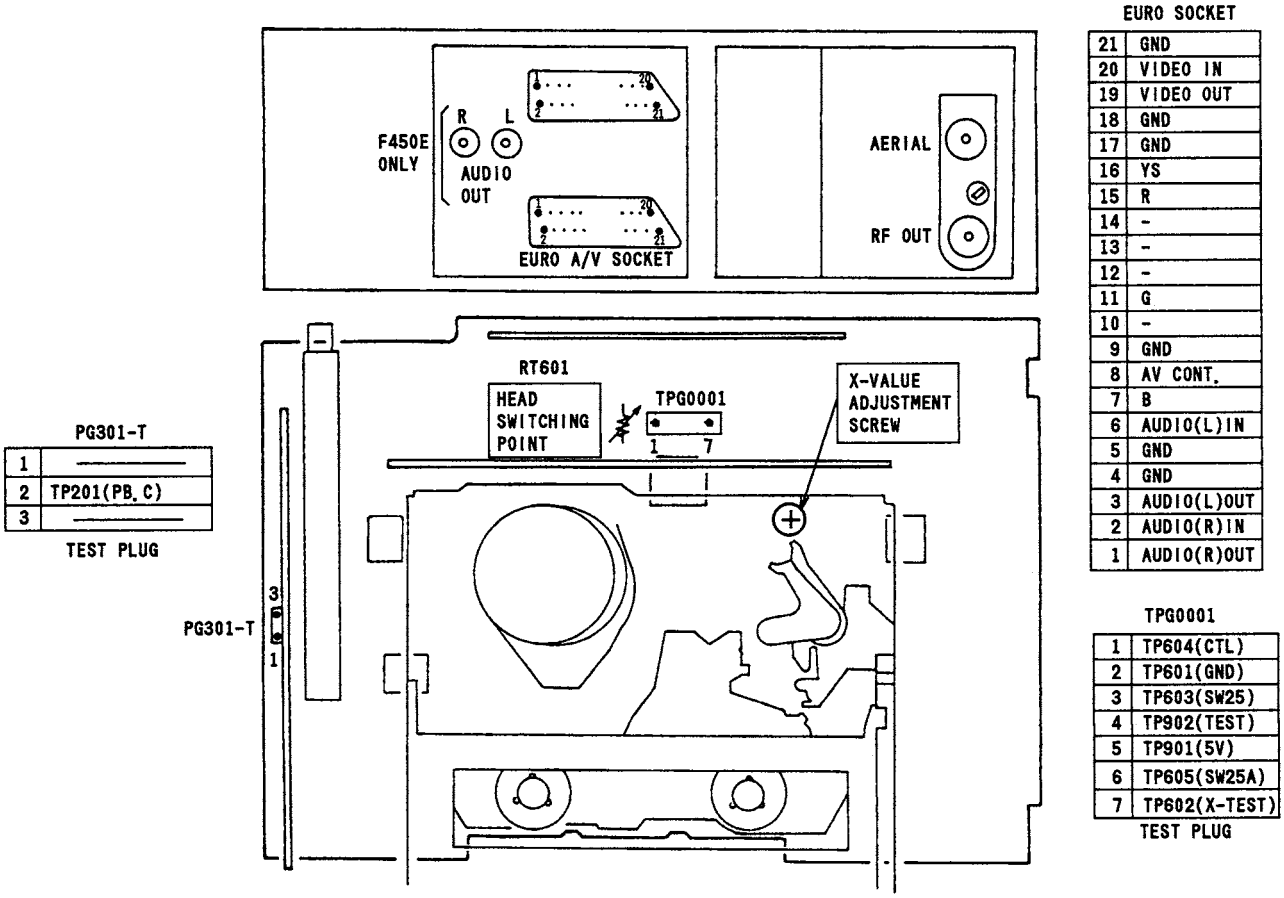


Fig. 9 MAS (MAIN) Circuit Board (Component Side)

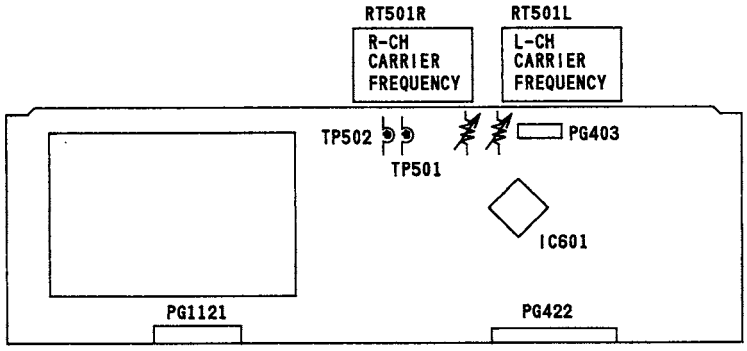


Fig. 10 PHA (PRE AMP/AUDIO) Circuit Board (Component Side)
- VT-F450E Only -

1. SERVO CIRCUIT ADJUSTMENT

1. Head Switching Point Adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose: To set the video head switching point during play to approximately the centre where the CH-1 and CH-2 envelopes overlap each other.

Fault:
- The vertical sync signal is degraded and vertical jitter occurs.
- Switching noise appears across the bottom of the screen.

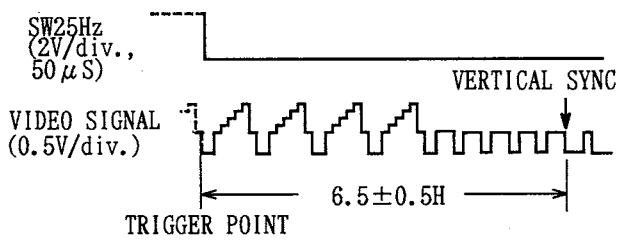
Test Equipment/Jigs	Test Equipment Connection Points	State of VCR	Adjustment Point
• Oscilloscope	• CH-1: VIDEO OUT • CH-2: TP603(SW25Hz)MAS	• Play alignment tape (Stairsteps Section) • Tracking control: Electrical centre	• RT601 MAS (SWITCHING POINT)
• Alignment tape (MH-2) (Parts No.7099052)			

Adjustment Procedure

1) Vertical sync signal:
   Set to 6.5H±0.5H from the trailing edge (trigger position) of the SW25Hz pulse.

<Settings of oscilloscope>
- Trigger with CH-2
- Set the sync slope to "-".

Waveforms



2. X-value Adjustment

Purpose of adjustment and fault occurring if incomplete

Purpose: To obtain compatibility with other VCRs.

Fault: Noise occurs when a tape recorded by another VCR is played back.

Test Equipment/Jigs	Test Equipment Connection Points	State of VCR	Adjustment Point
• Oscilloscope	• CH-1: TP201 (PB.C) WYC • CH-2: TP603 (SW25) MAS	• Play alignment tape (Stairsteps section) • Tracking control: Electrical centre	• X-value adjustment screw
• Alignment tape (MH-2) (Parts: No. 7099052)			

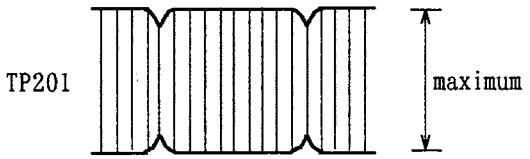
Adjustment Procedure

1) Play the alignment tape.
2) Turn the X-value adjustment screw to maximize the FM output.

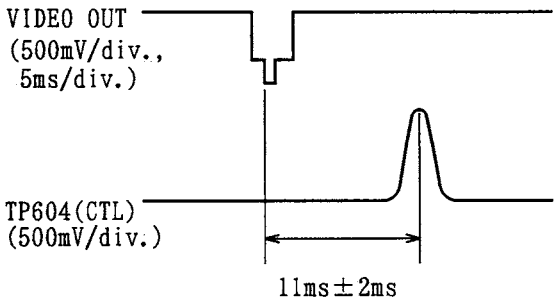
[Checking in the autotracking mode]

3) Change the oscilloscope's connection points.
   - CH-1: VIDEO OUTPUT jack
   - CH-2: TP604 (CTL)
4) Press the eject button to remove the cassette, then re-insert it and play it back to activate the autotracking function.
5) Check that the difference in phase from the CTL pulse to the V.SYNC in the video signal is 11±2ms. If this is drifted greatly, perform steps 1) - 5) again.

Waveforms



[Waveforms to be checked]



NOTE: The CTL pulse at TP604 is locked and does not move if the X-value adjustment screw is turned. Activate the autotracking function again and check the phase.

3. Vert. Sync Adjustment

Purpose of adjustment and fault occurring if incomplete	
Purpose: Change timing for adding vertical drive pulse and suppress vertical jitter in picture during still play.	Fault: Vertical jitter occurs during still play.

Test Equipment/Jigs	Test Equipment Connection Points	State of VCR	Adjustment Points
• Monitor TV • Colour bar generator (or receive TV programme) • Blank tape	• VIDEO OUT or RF OUT • VIDEO IN	• Record colour bar signal and play it back with this unit in STILL mode.	• TRACKING UP (Remote control) • TRACKING DOWN (Remote control)

Adjustment Procedure

SP Vert. Sync
1) Tape speed : SP
2) TRACKING BUTTONS : Suppress vertical jitter in picture.

LP Vert. Sync
1) Tape speed : LP
2) TRACKING BUTTONS : Suppress vertical jitter in picture.

4. Slow Tracking Preset Adjustment

Purpose of adjustment and fault occurring if incomplete	
Purpose: To adjust the timing to generate a brake pulse for the capstan motor during slow play and minimize noise.	Fault: Noise appears in the slow motion picture which is difficult to see.

Test Equipment/Jigs	Test Equipment Connection Points	State of VCR	Adjustment Points
• Monitor TV • Colour bar generator (or receive TV programme) • Blank tape	• VIDEO OUT or RF OUT • VIDEO IN	• Record colour bar signal and play it back with this unit in SLOW mode.	• TRACKING UP (Remote control) • TRACKING DOWN (Remote control)

Adjustment Procedure

SP Slow Tracking Preset
1) Tape speed : SP
2) TRACKING BUTTONS : Eliminate the noise from the monitor screen.

LP Slow Tracking Preset
1) Tape speed : LP
2) TRACKING BUTTONS : Eliminate the noise from the monitor screen.

5. Reverse Slow Tracking Preset Adjustment

Purpose of adjustment and fault occurring if incomplete	
Purpose: To adjust the timing to generate a brake pulse for the capstan motor during reverse slow play and minimize noise.	Fault: Noise appears in the reverse slow motion picture which is difficult to see.

Test Equipment/Jigs	Test Equipment Connection Points	State of VCR	Adjustment Points
• Monitor TV • Colour bar generator (or receive TV programme) • Blank tape	• VIDEO OUT or RF OUT • VIDEO IN	• Record colour bar signal and play it back with this unit in REV. SLOW mode.	• TRACKING UP (Remote control) • TRACKING DOWN (Remote control)

Adjustment Procedure

SP Reverse Slow Tracking Preset
1) Tape speed : SP
2) TRACKING BUTTONS : Eliminate the noise from the monitor screen.

LP Reverse Slow Tracking Preset
1) Tape speed : LP
2) TRACKING BUTTONS : Eliminate the noise from the monitor screen.

2. AUDIO CIRCUIT ADJUSTMENT

1. Carrier Frequency Adjustment - VT-F450E Only -

Purpose of adjustment and fault occurring if incomplete

Purpose: Set the audio carrier frequency to the specified value.

Fault:
- Compatibility with tapes recorded by another VCR cannot be obtained.
- Hi-Fi audio is not played back.

Test Equipment/Jigs	Test Equipment Connection Points	State of VCR	Adjustment Points
• Frequency counter	• TP501 PHA (when adjusting RT501L) • TP502 PHA (when adjusting RT501R)	• No-signal record mode (SP mode)	• RT501L (L-CH) PHA • RT501R (R-CH) PHA (CARRIER FREQUENCY)
• Blank tape			

Adjustment Procedure

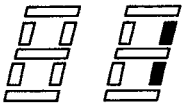
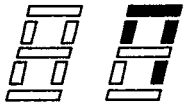
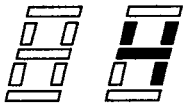
1) RT501L : The frequency counter reads 1400kHz±4kHz at TP501.
2) RT501R : The frequency counter reads 1800kHz±4kHz at TP502.

TROUBLE DISPLAY MODE

CHECK USING THE TROUBLE DISPLAY FUNCTION

This trouble display function displays the information on trouble in the mechanism control system detected by the system control μP (IC0901) using a code in the display.

[TROUBLE DISPLAY]

TROUBLE	DISPLAY(CLOCK INDICATOR)	TROUBLE	DISPLAY(CLOCK INDICATOR)
FL MECHANISM LOCK		LOADING MECHANISM LOCK	
CAPSTAN MOTOR LOCK		FF/REW SOFTRANDING ERROR	
REEL LOCK		SERVO LOCK/ POWER DOWN	
CYLINDER MOTOR LOCK			

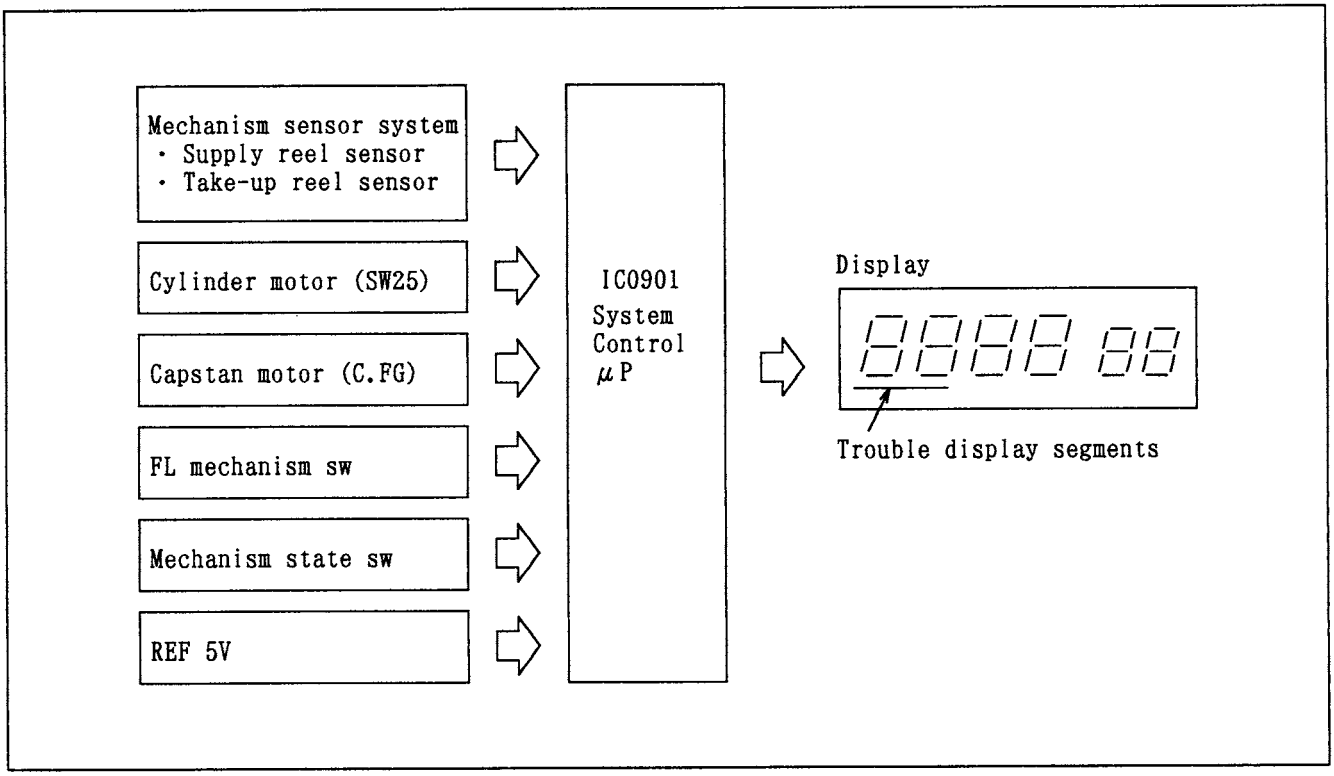


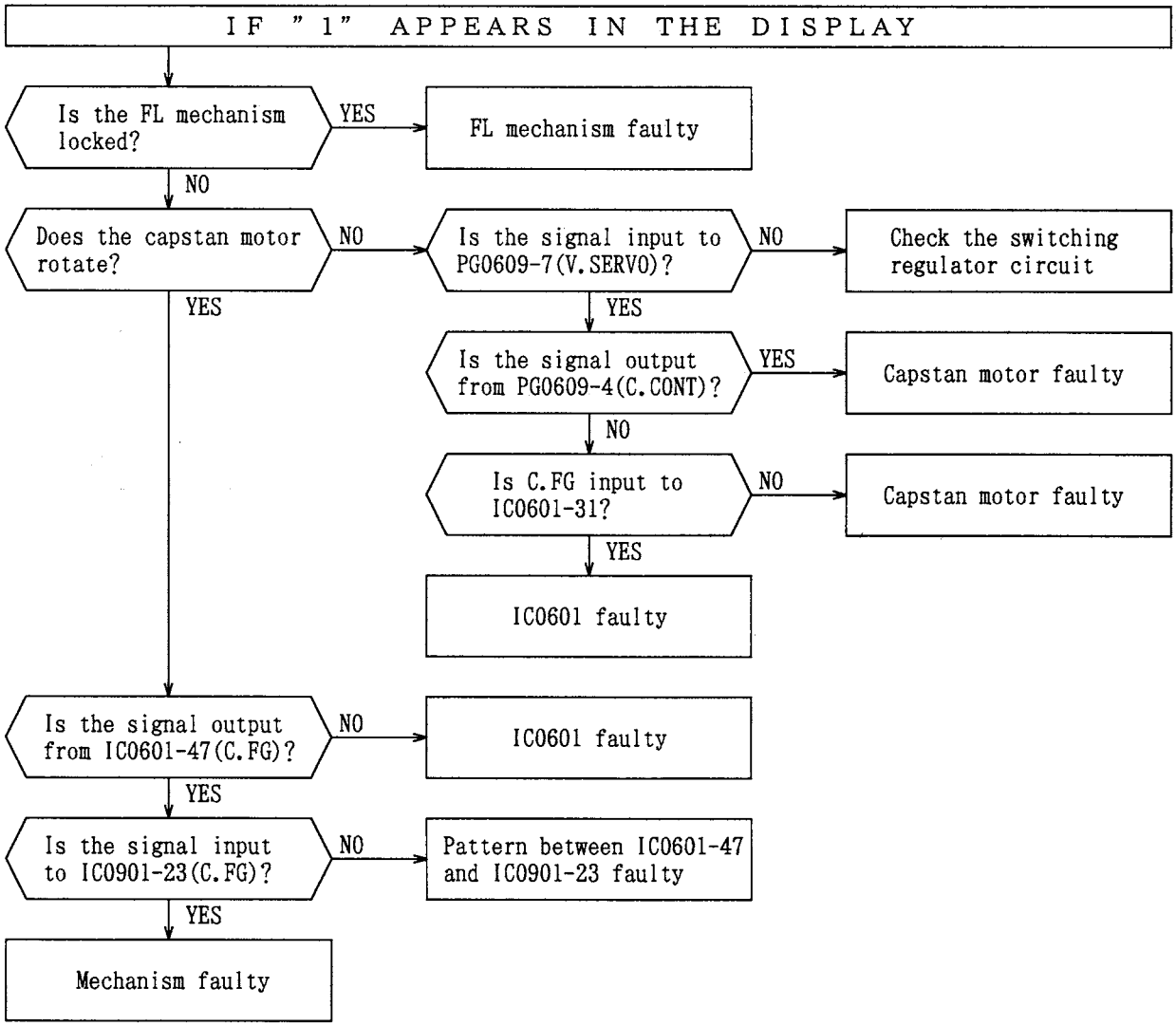
Fig.1 How to detect trouble

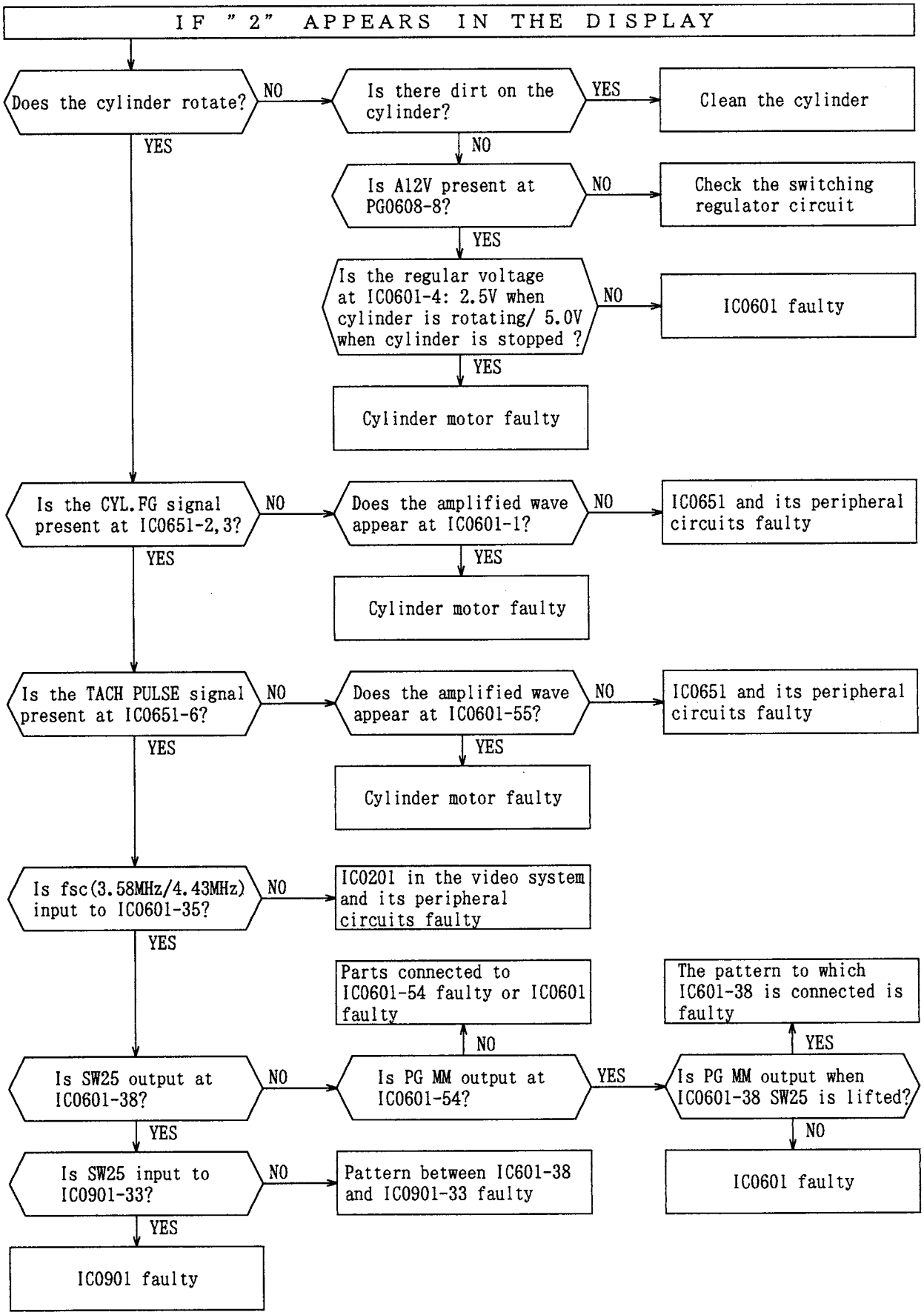
[HOW TO DISPLAY A TROUBLE]

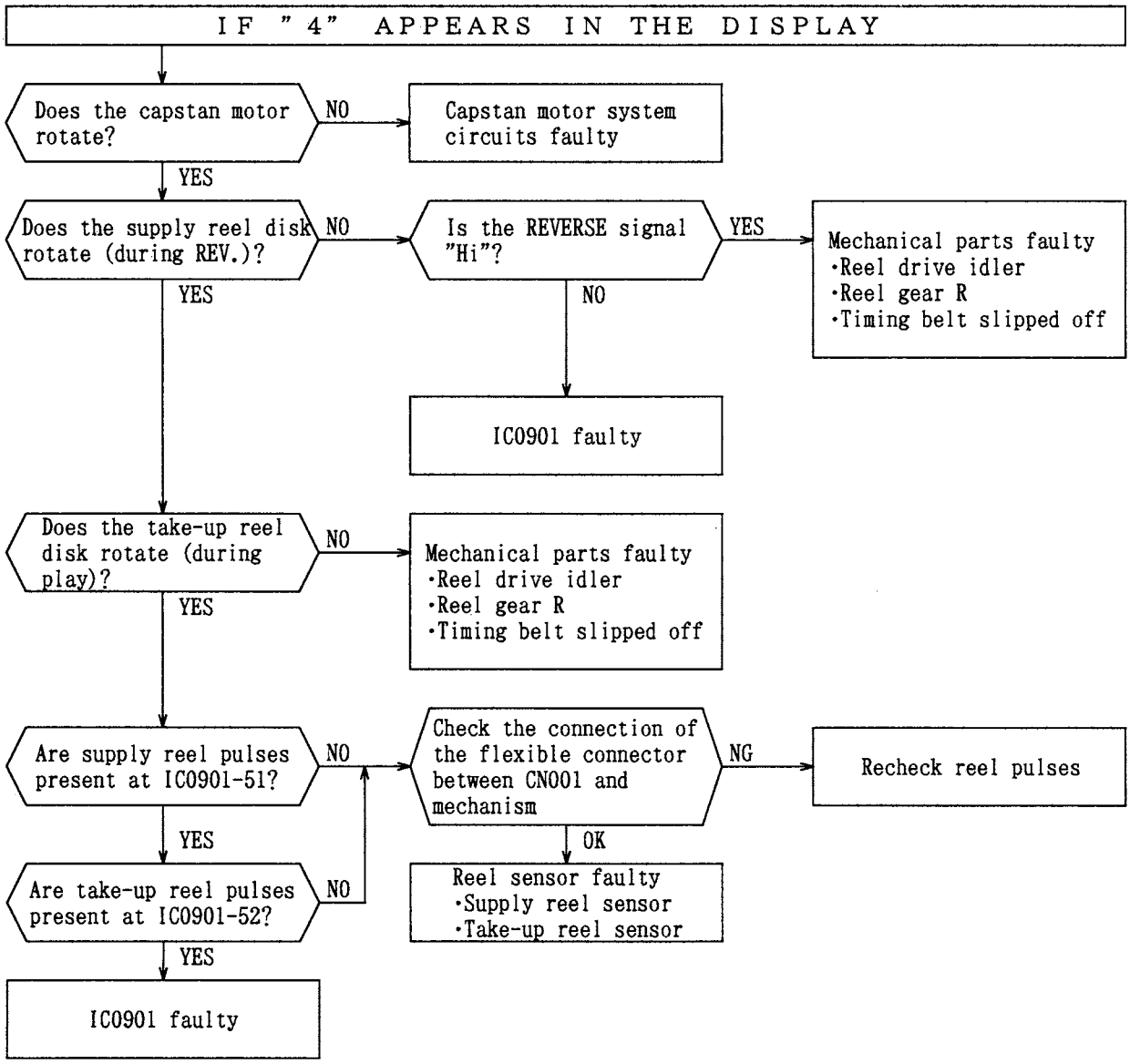
With the power off, press the CH (▼) button on the VCR. The trouble information is displayed only when this button is are held depressed.

★ TROUBLESHOOTING ACCORDING TO TROUBLE DISPLAYS

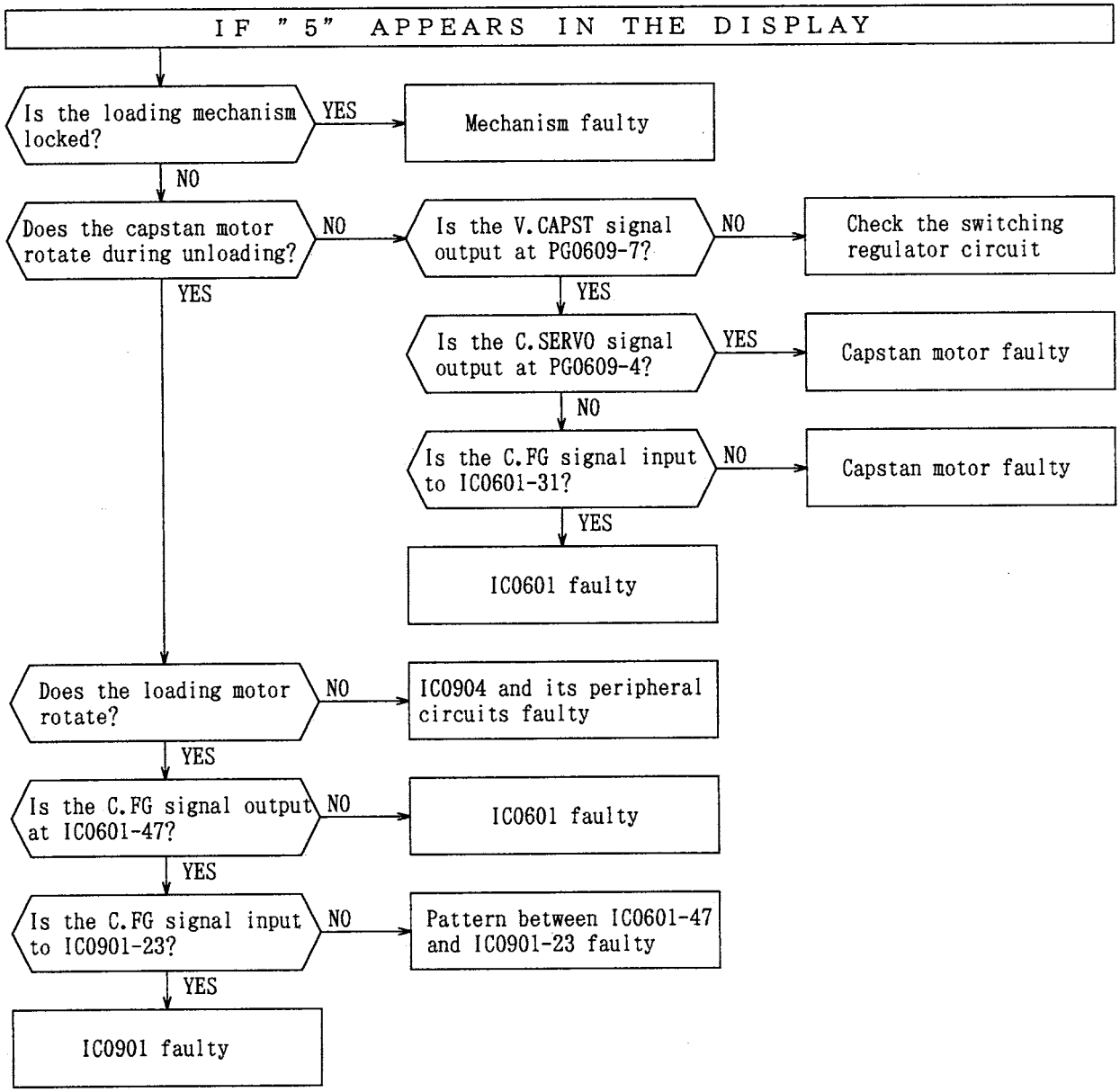
If the trouble display function locates a detective position, follow the flowcharts below for troubleshooting.

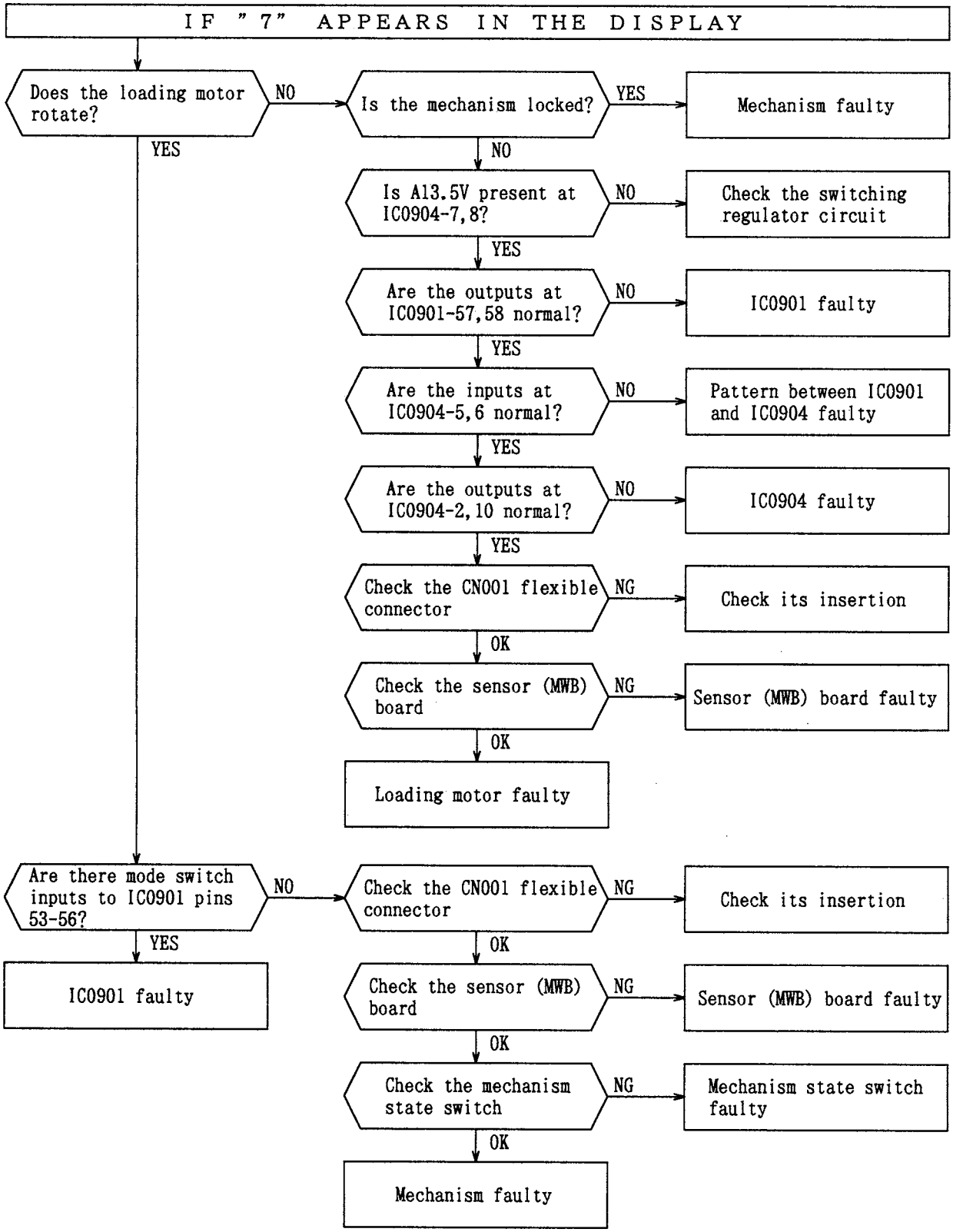


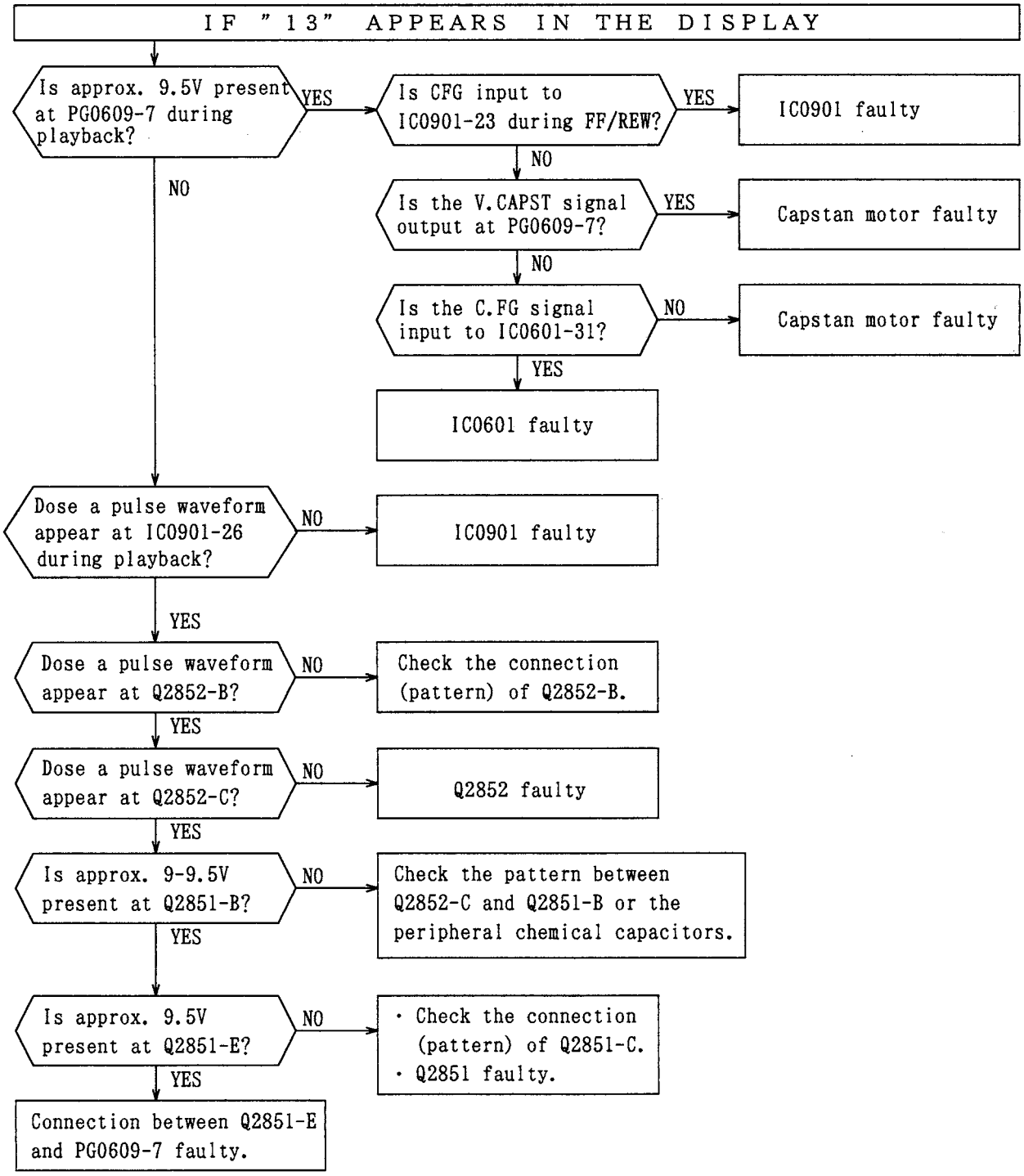

IF " 2" APPEARS IN THE DISPLAY
Does the cylinder rotate?
NO
Is there dirt on the cylinder?
YES
Clean the cylinder
YES
NO
Is A12V present at PG0608-8?
NO
Check the switching regulator circuit
YES
Is the regular voltage at IC0601-4: 2.5V when cylinder is rotating/ 5.0V when cylinder is stopped ?
NO
IC0601 faulty
YES
Cylinder motor faulty
Is the CYL.FG signal present at IC0651-2,3?
NO
Does the amplified wave appear at IC0601-1?
NO
IC0651 and its peripheral circuits faulty
YES
YES
Cylinder motor faulty
Is the TACH PULSE signal present at IC0651-6?
NO
Does the amplified wave appear at IC0601-55?
NO
IC0651 and its peripheral circuits faulty
YES
YES
Cylinder motor faulty
Is fsc(3.58MHz/4.43MHz) input to IC0601-35?
NO
IC0201 in the video system and its peripheral circuits faulty
YES
Parts connected to IC0601-54 faulty or IC0601 faulty
The pattern to which IC601-38 is connected is faulty
NO
YES
Is SW25 output at IC0601-38?
NO
Is PG MM output at IC0601-54?
YES
Is PG MM output when IC0601-38 SW25 is lifted?
YES
NO
Is SW25 input to IC0901-33?
NO
Pattern between IC601-38 and IC0901-33 faulty
IC0601 faulty
YES
IC0901 faulty

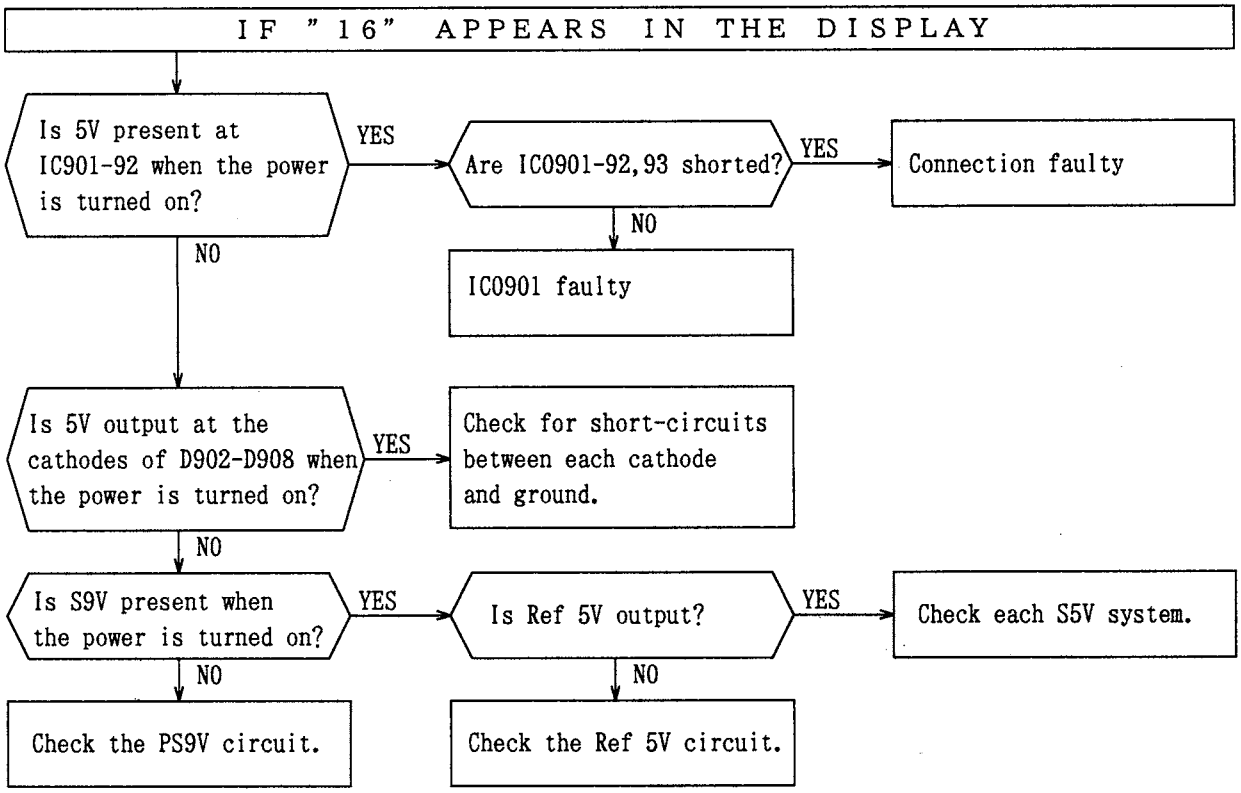


CAUTION : The cylinder system has priority. If the cylinder motor does not rotate normally, the capstan motor does not rotate.


IF " 5" APPEARS IN THE DISPLAY
Is the loading mechanism locked?
YES
Mechanism faulty
NO
Does the capstan motor rotate during unloading?
NO
Is the V.CAPST signal output at PG0609-7?
NO
Check the switching regulator circuit
YES
YES
Is the C.SERVO signal output at PG0609-4?
YES
Capstan motor faulty
NO
Is the C.FG signal input to IC0601-31?
NO
Capstan motor faulty
YES
IC0601 faulty
Does the loading motor rotate?
NO
IC0904 and its peripheral circuits faulty
YES
Is the C.FG signal output at IC0601-47?
NO
IC0601 faulty
YES
Is the C.FG signal input to IC0901-23?
NO
Pattern between IC0601-47 and IC0901-23 faulty
YES
IC0901 faulty


IF " 7" APPEARS IN THE DISPLAY
Does the loading motor rotate?
NO
Is the mechanism locked?
YES
Mechanism faulty
YES
NO
Is A13.5V present at IC0904-7,8?
NO
Check the switching regulator circuit
YES
Are the outputs at IC0901-57,58 normal?
NO
IC0901 faulty
YES
Are the inputs at IC0904-5,6 normal?
NO
Pattern between IC0901 and IC0904 faulty
YES
Are the outputs at IC0904-2,10 normal?
NO
IC0904 faulty
YES
Check the CN001 flexible connector
NG
Check its insertion
OK
Check the sensor (MWB) board
NG
Sensor (MWB) board faulty
OK
Loading motor faulty
Are there mode switch inputs to IC0901 pins 53-56?
NO
Check the CN001 flexible connector
NG
Check its insertion
YES
OK
IC0901 faulty
Check the sensor (MWB) board
NG
Sensor (MWB) board faulty
OK
Check the mechanism state switch
NG
Mechanism state switch faulty
OK
Mechanism faulty


IF "13" APPEARS IN THE DISPLAY
Is approx. 9.5V present at PG0609-7 during playback?
YES
Is CFG input to IC0901-23 during FF/REW?
YES
IC0901 faulty
NO
NO
Is the V.CAPST signal output at PG0609-7?
YES
Capstan motor faulty
NO
Is the C.FG signal input to IC0601-31?
NO
Capstan motor faulty
YES
IC0601 faulty
Dose a pulse waveform appear at IC0901-26 during playback?
NO
IC0901 faulty
YES
Dose a pulse waveform appear at Q2852-B?
NO
Check the connection (pattern) of Q2852-B.
YES
Dose a pulse waveform appear at Q2852-C?
NO
Q2852 faulty
YES
Is approx. 9-9.5V present at Q2851-B?
NO
Check the pattern between Q2852-C and Q2851-B or the peripheral chemical capacitors.
YES
Is approx. 9.5V present at Q2851-E?
NO
· Check the connection (pattern) of Q2851-C.
· Q2851 faulty.
YES
Connection between Q2851-E and PG0609-7 faulty.

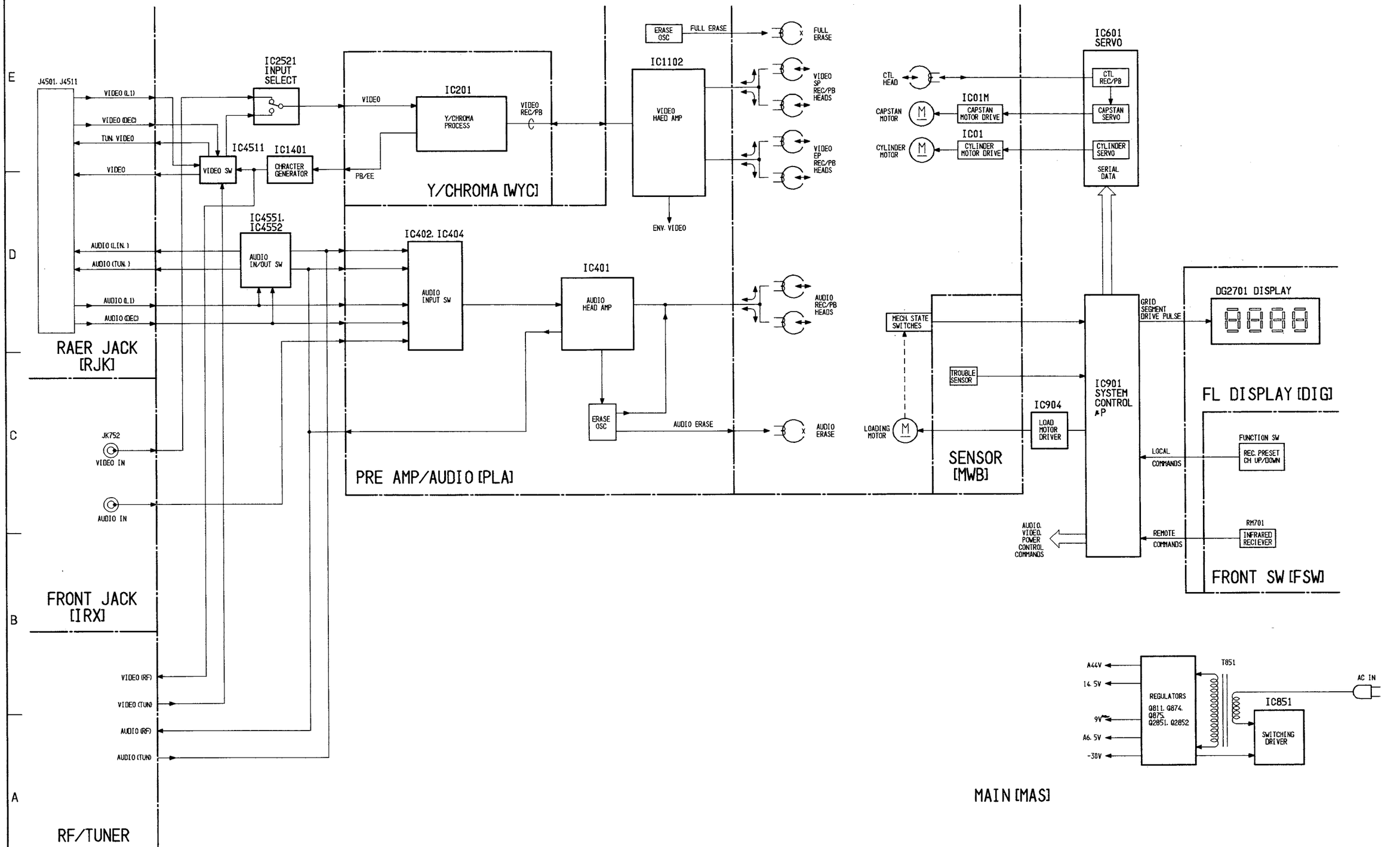


CAUTION : When "16" is displayed, the power is not turned on for 5 seconds.

CHAPTER 4

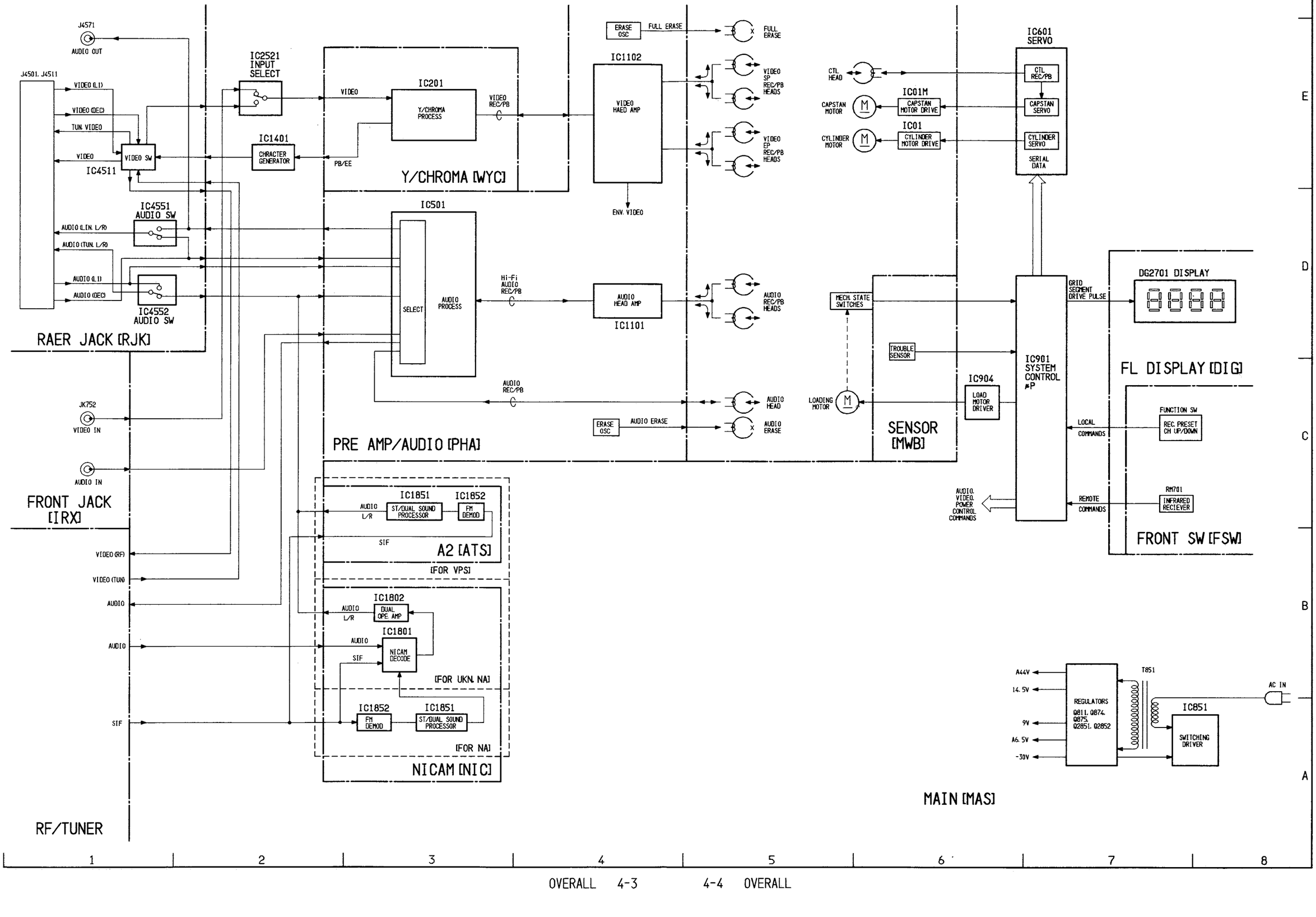
BLOCK DIAGRAMS
&
MICROPRPCESSOR
PIN FUNCTION TABLE

1. BLOCK DIAGRAMS
OVERALL BLOCK DIAGRAM -For M430E-



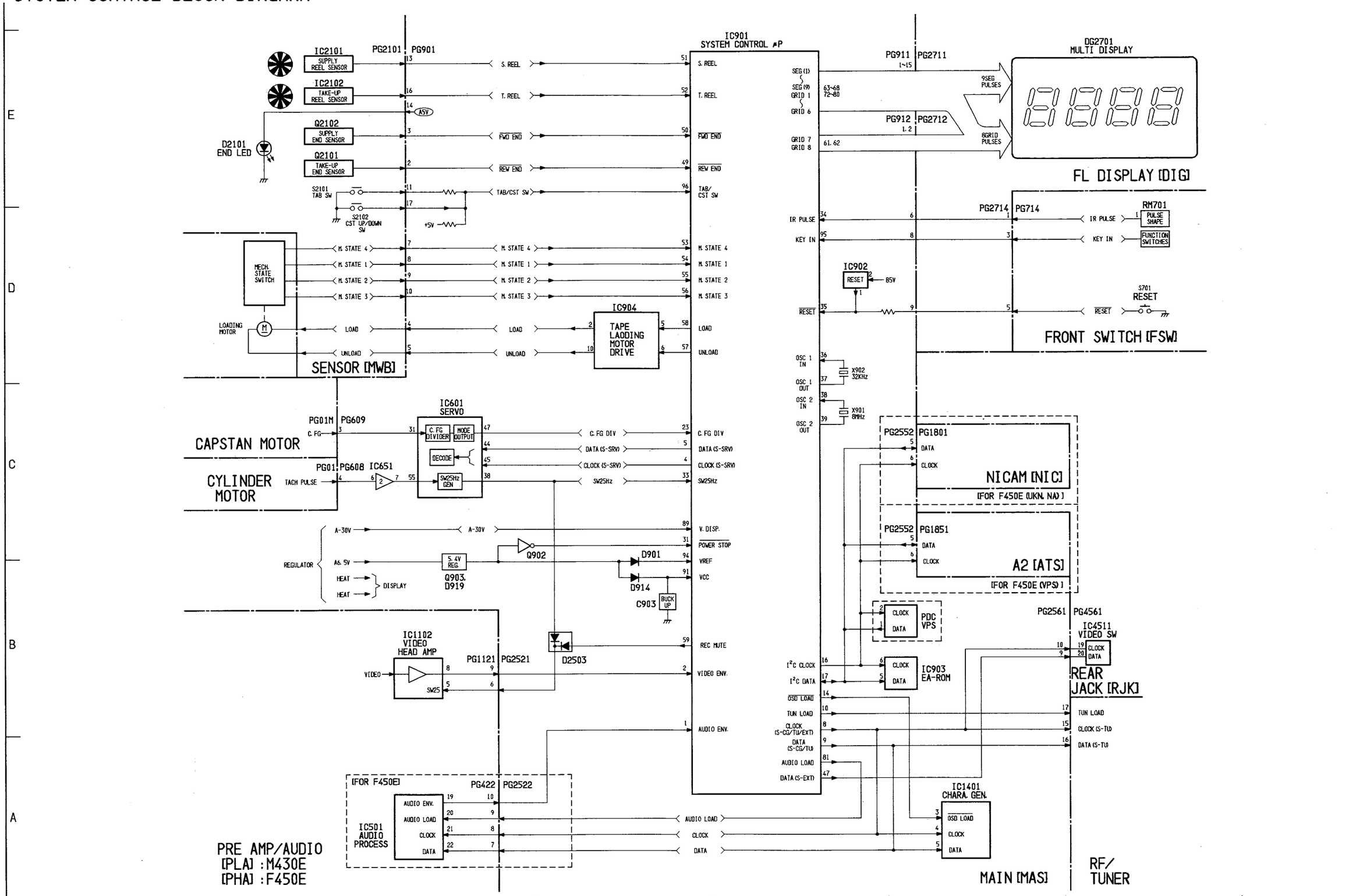
OVERALL 4-1 4-2 OVERALL

OVERALL BLOCK DIAGRAM -For F450E-

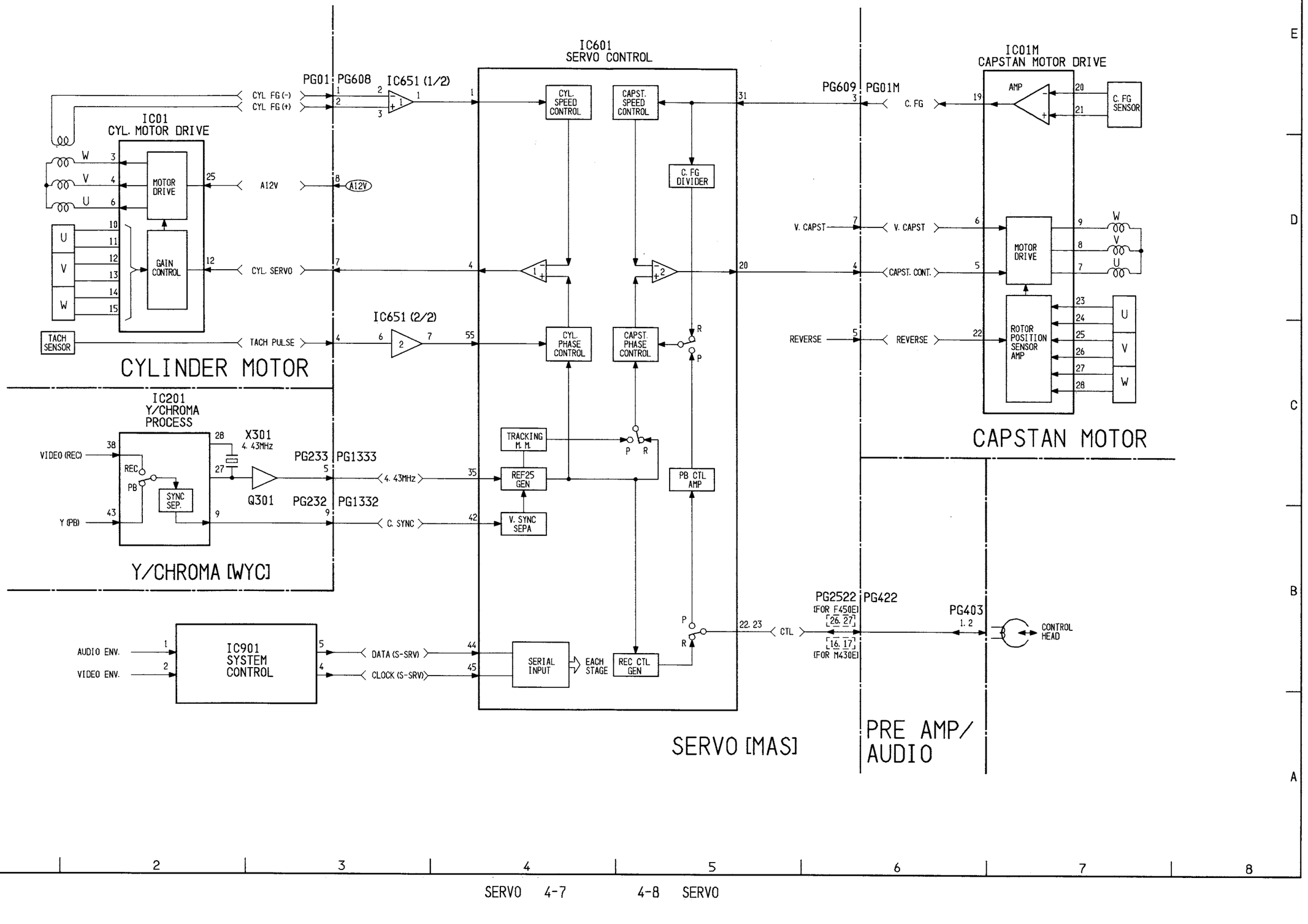


OVERALL 4-3 4-4 OVERALL

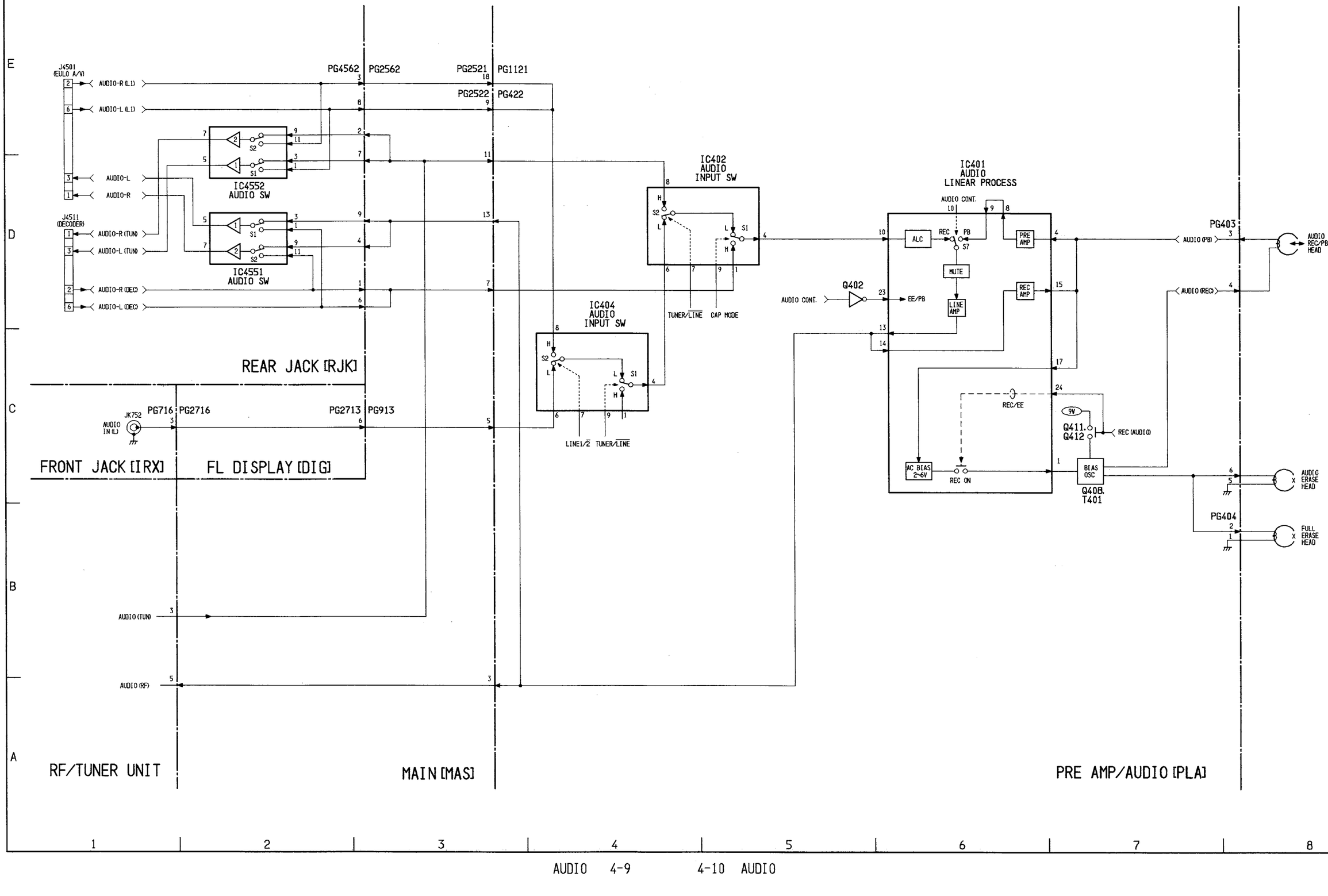
SYSTEM CONTROL BLOCK DIAGRAM



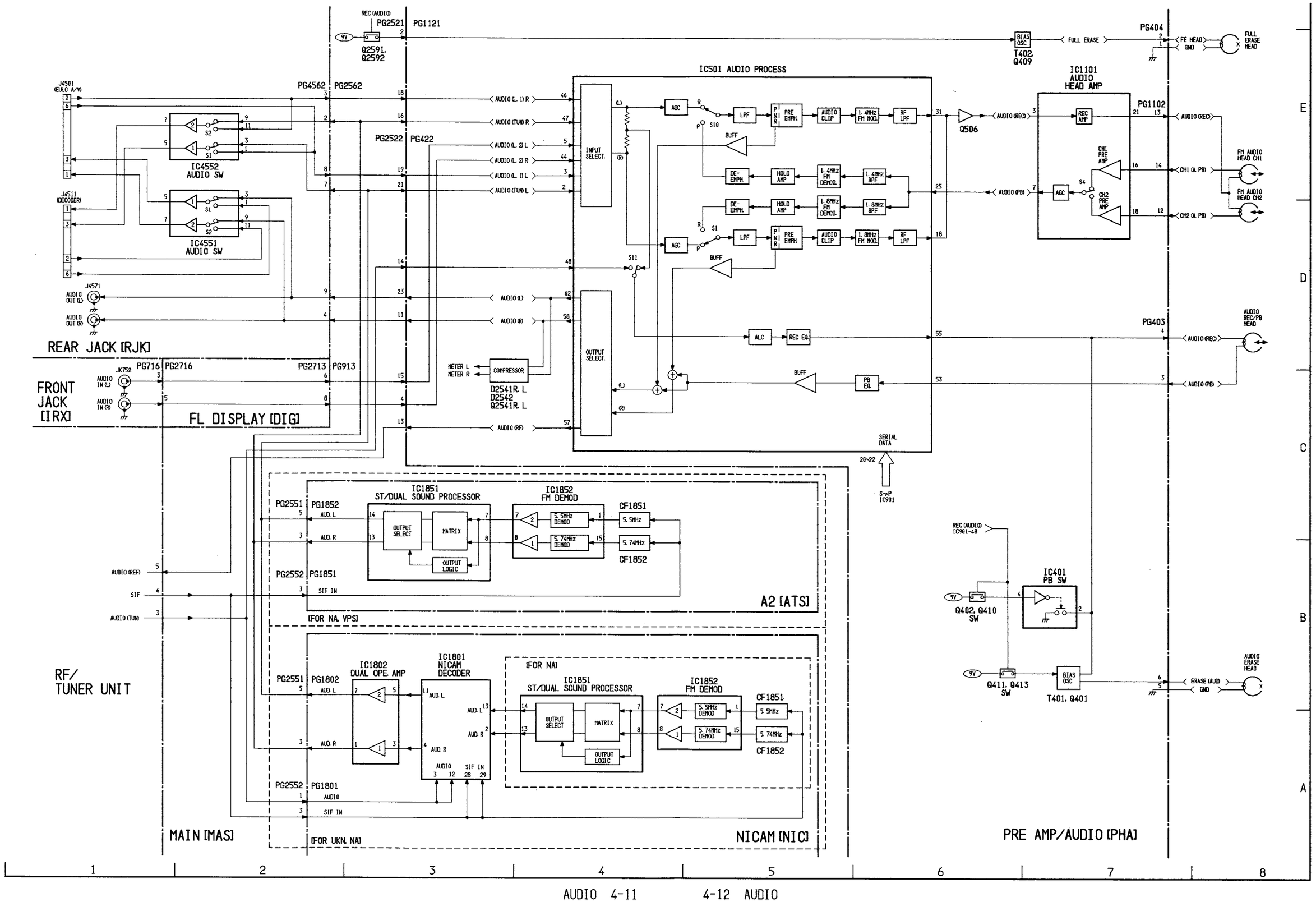
SERVO BLOCK DIAGRAM



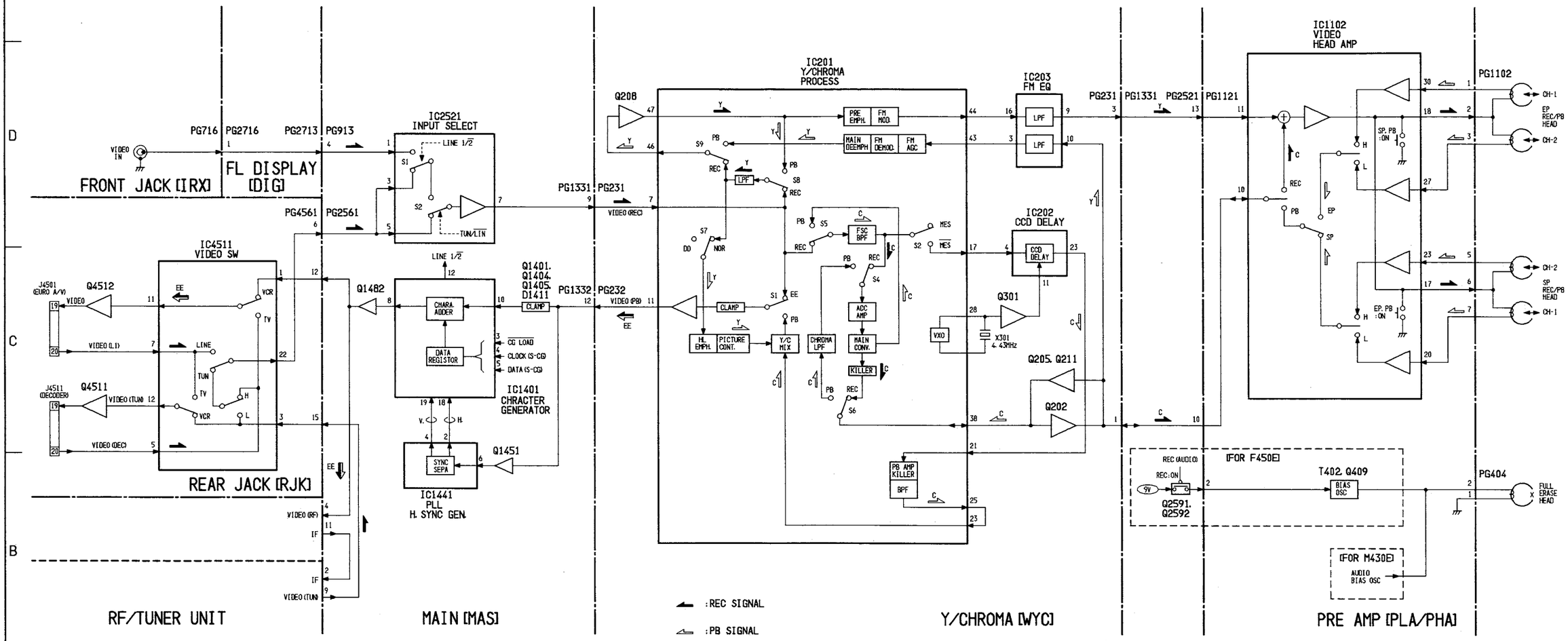
AUDIO BLOCK DIAGRAM -For M430E-



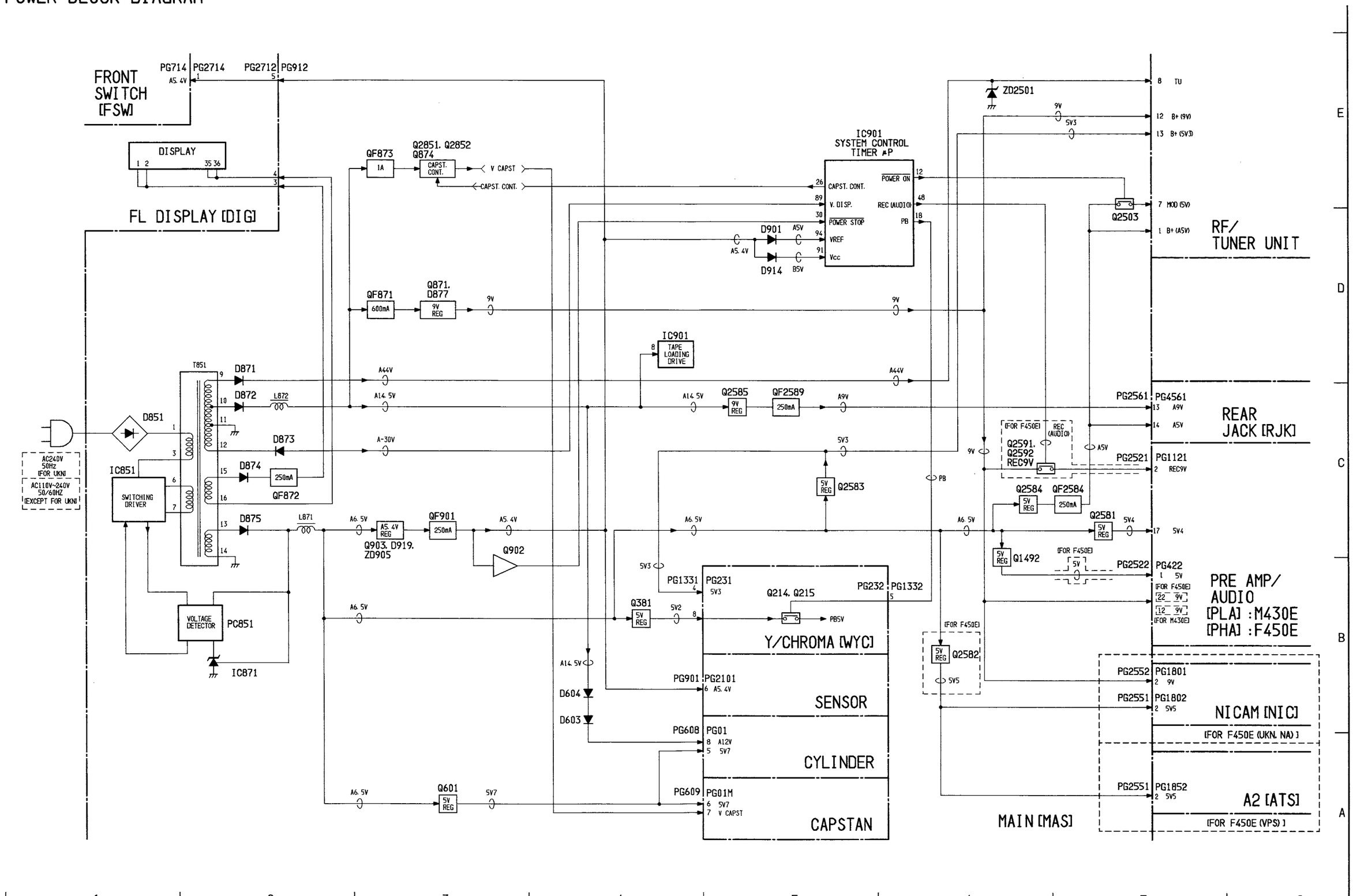
AUDIO BLOCK DIAGRAM -For F450E-



VIDEO BLOCK DIAGRAM



POWER BLOCK DIAGRAM



2. MICROPROCESSOR PIN FUNCTION TABLE

System Control μP (IC901) Pin Functions

Pin No.	I/O	Active Level	Abbreviation	Function
1 2	I I	DC DC	AUDIO ENV. VIDEO ENV.	Inputs a DC voltage representing the envelope of the playback video/audio FM signal and stores it in a register in the IC to search the maximum envelope.
3	I	Lo	$\overline{\text{SYNC DET}}$	The μP judges that a TV station is tuned normally when logic "Lo" is input in the channel tuning mode.
4	0	Pulse	CLOCK (S-SRV)	Outputs the clock pulse necessary to transfer data to the servo IC.
5	0	Pulse	DATA (S-SRV)	Outputs data to the servo IC. The data includes modes of operation (PB, REC, ASSEMBLE, CYL. ON) , tape speed, tracking data, etc.
6		—	NC	
7		—	NC	
8	0	Pulse	CLOCK(S-CG/TU/AUD/EXT)	Clock pulse to transfer data from the system control μP to the character generator and tuning interface and audio IC and decoder video SW. IC.
9	0	Pulse	DATA(S-CG/TU/AUD)	Outputs OSD data to the character generator and tuning data to the tuning interface and control data to the audio IC.
10	I	Lo	$\overline{\text{CTL DUTY}}$	When "Lo" is input, the VCR performs playback for 10 seconds in the scana indexing mode.
11		—	NC	
12	0	Lo	$\overline{\text{POWER ON}}$	Outputs "Lo" to activate the 5V power supply circuit when the operate switch is pressed.
13	0	Hi	POWER SAVE	Power save signal during power off.
14	0	Lo	$\overline{\text{CG LOAD}}$	Activates the data communication function between the system control μP and character generator.
15	0	Hi	PRESET	Outputs "Hi" during tuning preset mode to let the monitor TV display the tuned picture.
16	0	Pulse	I²C CLOCK	Outputs a clock pulse necessary to communicate information between the system control μP and the EAROM and between the system control μP and the decoders.
17	I/O	Pulse	I²C DATA	Data input and output port. Data is communicated between the system control μP and the EAROM and between the system control μP and the decoders.
18	0	Hi	PB	Outputs "Hi" in the playback to set the AUDIO and Y/Chroma circuit to the playback mode.
19	0	H/L	TUN/$\overline{\text{LINE}}$	Tuner/external input switching signal.
20	0	Hi	LINE MUTE	Mute control of the audio output.
21	0	Hi	C. ROT	Control of the chroma signal.
22	0	Hi	HEAD SW	Head select output. Outputs "Hi" in the slow and frame advance modes to select the same heads as those used in normal playback.
23	I	Pulse	C.FG DIV	Divided Capstan FG input. 1. Stops tape unloading when there is no input during unloading to prevent damage to the tape. 2. When pause is instructed and released in the recording mode, the timing of recording restart is determined by counting up and down the number of C.FG signals to minimize the overlapped section.
24 32	I I	Pulse Pulse	$\overline{\text{CTL}}$ $\overline{\text{CTL}}$	Counted to display the real time counter. Used as the timing pulse to produce the brake pulse in the intermittent drive mode. Used to detect the tape speed of recorded tapes in the playback mode.

Pin No.	I/O	Active Level	Abbreviation	Function
25	0	Pulse	IR OUT	Remote hand unit signal output for CABLE BOX.
26	0	Pulse	V.CAPST.CONT	Outputs a PWM (pulse width modulation) signal to regulate the power supply voltage of the capstan motor. The output is regulated so that the V.capst becomes 10 V in the playback and recording modes, and 13V in the fast forward, rewind and stop modes.
27	0	Hi	AUD. CONT	Output "Hi" to set the audio circuit to the playback mode.
28	0	H/L H/M/L	HiFi REC MUTE/ SP SRCH	Mutes the Hi-Fi recording current. H:MUTE ON L:MUTE OFF SP search control. H:DA4 SERCH M:NORMAL L:SERCH OF EXCEPT FOR DA4
29	0	Hi	REC (VIDEO)	Outputs "Hi" in the record mode to set the video circuit to the recording mode.
48	0	Hi	REC (AUDIO)	Outputs "Hi" in the record mode to set the audio circuit to the recording mode.
30	I	Lo	$\overline{\text{POWER STOP}}$	Turns the power off when overvoltage is detected.
31	I	Hi	HEAD COMP	Head output comparison input.
33	I	Pulse	SW25Hz	Used to generate the ACCEL pulse in the slow mode. The period is monitored to judge whether or not the cylinder is rotating normally. If the period is too long, the μP commands unloading to prevent damage to the tape.
34	I	Pulse	IR PULSE	Receives the remote control signal.
35	I	Lo	$\overline{\text{RESET}}$	Initializes the μP.
36 37	I 0	AC AC	OSC1 IN OSC1 OUT	32KHz clock oscillator input/output.
38 39	I 0	AC AC	OSC2 IN OSC2 OUT	8MHz clock oscillator input/output pins.
40		Lo	Vss	Ground
41	I	Pulse	TRACK.TRIG.	Used as the reference signal for tracking control.
42		—	NC	
43	0	Hi	REVERSE	Outputs "Hi" to drive the capstan motor in the reverse direction.
44	0	H/M/L	CAPST.SERVO	Outputs a "Hi" pulse to drive the capstan motor and advance the tape by one frame in the intermittent drive mode. Outputs "Lo" to stop the capstan motor when the tape is driven intemittently. Output "Mi" in the servo output control mode.
45 46	0 0	H/M/L H/M/L	SWAY 2 SWAY 1	Output shake correction pulses to the cylinder servo circuit in the still mode.
47	0	Pulse	DATA(S-EXT)	Output data to the decorder to the video sw IC.
49	I	Lo	$\overline{\text{REW END}}$	Take -up end sensor input. Stops rewind when "Lo" is input.
50	I	Lo	$\overline{\text{FWD END}}$	Supply end sensor input. Stops the tape when "Lo" is input.
51	I	Pulse	S.REEL	Supply reel pulse input. Used to calculate the tape remaining time.
52	I	Pulse	T.REEL	Take-up reel pulse input. Used to check whether or not the take-up reel disk is rotating. If the period is too long, commands unloading to prevent damage to the tape. The tape remaining time is calculated from the period of the take-up and supply reel pulses.

<table>
<tr><th>Pin No.</th><th>I/O</th><th>Active Level</th><th>Abbreviation</th><th>Function</th></tr>
<tr><td>53
54
55
56</td><td>I
I
I
I</td><td>H/L
H/L
H/L
H/L</td><td>M.STATE 4
M.STATE 1
M.STATE 2
M.STATE 3</td><td>Mechanism state inputs. Detect the operation mode of the mechanism using the rotary mechanism state switch and specify the logic levels at LOAD and UNLOAD pins to control the tape loading motor.
<table>
<tr><th>Position</th><th>1
EJECT</th><th>2
UNLOAD
STOP</th><th>3
FAST
REW</th><th>4
LOAD
STOP2</th><th>5
F.FWD
/REW</th><th>6
PB/
REC</th><th>7
STILL
/SLOW</th><th>8
REV.
SLOW</th><th>9
REV.PB/
REV.SEARCH</th><th>10
TRAN.
SITION</th></tr>
<tr><td>Pin 53</td><td>Lo</td><td>Lo</td><td>Hi</td><td>Lo</td><td>Lo</td><td>Lo</td><td>Lo</td><td>Lo</td><td>Hi</td><td>Lo</td></tr>
<tr><td>Pin 54</td><td>Lo</td><td>Hi</td><td>Lo</td><td>Hi</td><td>Lo</td><td>Lo</td><td>Hi</td><td>Hi</td><td>Hi</td><td>Lo</td></tr>
<tr><td>Pin 55</td><td>Hi</td><td>Hi</td><td>Lo</td><td>Lo</td><td>Lo</td><td>Hi</td><td>Hi</td><td>Lo</td><td>Lo</td><td>Lo</td></tr>
<tr><td>Pin 56</td><td>Lo</td><td>Lo</td><td>Lo</td><td>Hi</td><td>Hi</td><td>Hi</td><td>Hi</td><td>Lo</td><td>Lo</td><td>Lo</td></tr>
</table></td></tr>
<tr><td>57
58</td><td>O
O</td><td>Hi
Hi</td><td>UNLOAD
LOAD</td><td>Control the rotation of the tape loading motor via the loading motor driver.
<table>
<tr><th></th><th>STOP</th><th>LOAD</th><th>UNLOAD</th><th>BRAKE</th></tr>
<tr><td>Pin 57</td><td>Lo</td><td>Lo</td><td>Hi</td><td>Hi</td></tr>
<tr><td>Pin 58</td><td>Lo</td><td>Hi</td><td>Lo</td><td>Hi</td></tr>
</table></td></tr>
<tr><td>59</td><td>O</td><td>Hi</td><td>REC MUTE</td><td>Outputs a muting pulse which inhibits recording of video signal during loading and recording pause modes.</td></tr>
<tr><td>60</td><td>O</td><td>Hi</td><td>CURRENT UP</td><td>Outputs “Hi” to increase the recording current of the video signal for about 7s (PAL SP speed) after the assemble mode has been released or tape has been loaded in the recording mode. (Not used)</td></tr>
<tr><td>61
62
63
64
65
66
67
68</td><td>O
O
O
O
O
O
O
O</td><td>Pulse
Pulse
Pulse
Pulse
Pulse
Pulse
Pulse
Pulse</td><td>GRID 8
GRID 7
GRID 6
GRID 5
GRID 4
GRID 3
GRID 2
GRID 1</td><td>Output grid drive pulses.</td></tr>
<tr><td>69
70
71</td><td></td><td>—</td><td>NC</td><td></td></tr>
<tr><td>72
73
74
75
76
77
78
79
80</td><td>O
O
O
O
O
O
O
O
O</td><td>Pulse
Pulse
Pulse
Pulse
Pulse
Pulse
Pulse
Pulse
Pulse</td><td>SEGMENT (9)
SEGMENT (8)
SEGMENT (7)
SEGMENT (6)
SEGMENT (5)
SEGMENT (4)
SEGMENT (3)
SEGMENT (2)
SEGMENT (1)</td><td>Output segment drive pulses and key scan pulses.</td></tr>
<tr><td>81</td><td>O</td><td>Hi</td><td>AUDIO LOAD</td><td>Activates the data communication function between the system control μP and audio process.</td></tr>
<tr><td>82</td><td></td><td>—</td><td>NC</td><td></td></tr>
<tr><td>83</td><td>O</td><td>Hi</td><td>TUNER LOAD</td><td>Activates the data communication function between the system control μP and tuning interface IC.</td></tr>
<tr><td>84</td><td>O</td><td>H/L</td><td>EDIT OUT</td><td>Outputs “Lo” to set the record VCR to the recording pause mode. “Hi” is output after a programmed section has been played back in the auto assemble edit mode.</td></tr>
<tr><td>85</td><td>I</td><td>H/L</td><td>EDIT IN</td><td>When “Hi” is input in the recording mode, the μP sets the VTR to the recording pause mode.</td></tr>
</table>

Pin No.	I/O	Active Level	Abbreviation	Function
86	I	Hi	CLOCK FAST	The clock goes 60 times as fast as the correct time. Used to check the function of the clock.
87	I	Hi	TEST	Set the TEST mode (X value).
88	0	Hi	TRICK PLAY	Outputs "Hi" during trick play to switch the characteristics of the luminance and chrominance circuits and to mute the audio signal.
89	I	-30V	V.DISP	Negative power supply. Used to generate the grid and segment drive pulses.
90	I	Pulse	MODEL SWITCH	Detects the presence/absence of the diode connected between this pin and segment output pins to determine the functions of the VCR.

Scan pulse input/output pins		Function	
Input	Output	When connected via a diode.	When not connected via a diode.
90	80	HiFi AUDIO	LINEAR AUDIO
	79	Provides tape index	Without tape index
	78	Provides Front Jack	Without Front Jack
	77	Provides Decorder control IC.	Without Decorder control IC.
	76	Receives 1 broadcast band	Receives 3 broadcast band
	75	Provides A/V DUB.	Without A/V DUB.
	74	Provides PAL/SECAM select	Without PAL/SECAM select

91	I	5V	Vcc	5V power supply.
92	I	5V	V.CHECK	Short-circuit protection input.
93	I	Lo	GND	Ground.
94	I	5V	VREF	5V power supply.
95	I	A/D	KEY IN	Receives one of 11 voltages corresponding to the pressed key on the front pannel. When no key is pressed, this pin is kept at "Hi". When a key is pressed, the divider corresponding to the pressed key is active and a divided voltage is produced. Then the μP digitizes this divided voltage to detect the pressed key.
96	I	H/M/L	TAB/CST SW	1. Enables recording when the tab is intact and "Hi" is input. 2. Ejects the cassette automatically when its safety tab is not in place so "Mid" is input and recording is not set. 3. Detects the insertion (Lo), completion (Hi) and ejection (Hi) of a cassette, and turns on or off the capstan motor to perform cassette loading or unloading.
97	I	A/D	S-CURVE	Detects the state of tuning in the tuning preset mode.
98	I	A/D	METER R	Audio Level Meter input for R-ch
99	I	A/D	METER L	Audio Level Meter input for L-ch
100	I	A/D	DEC. CONT.	Decorder control signal.

CHAPTER 5

SCHEMATIC & CIRCUIT BOARD DIAGRAMS

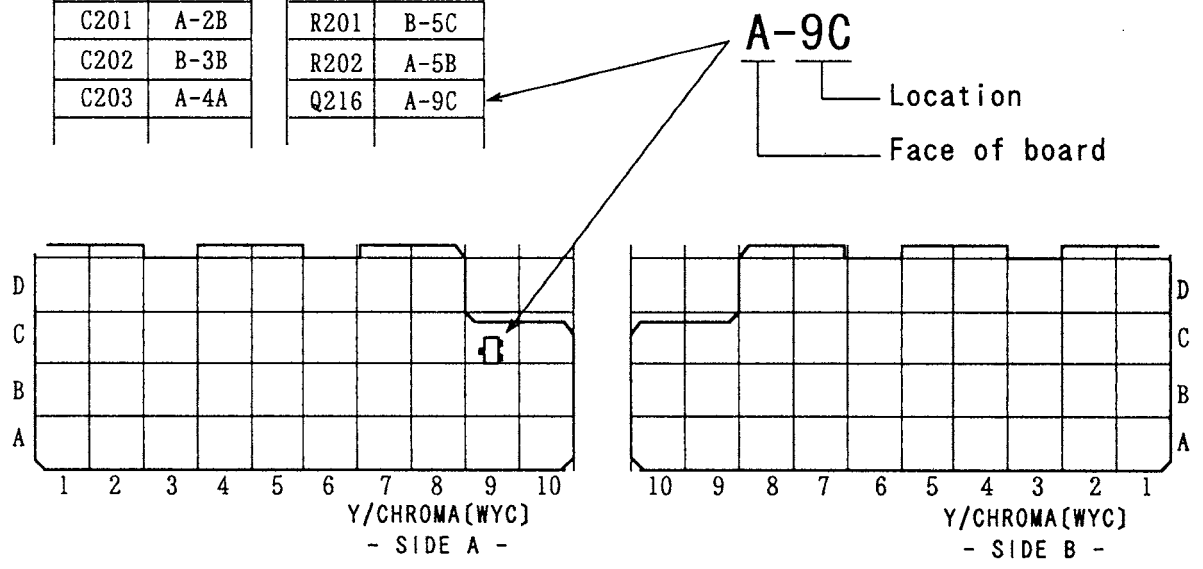
[Parts Location Indexing Tables]

This service manual shows the parts location indexing tables beside the major circuit board diagrams. These tables indicate the locations of each part on the circuit boards. Use the tables to locate the parts on the circuit boards.

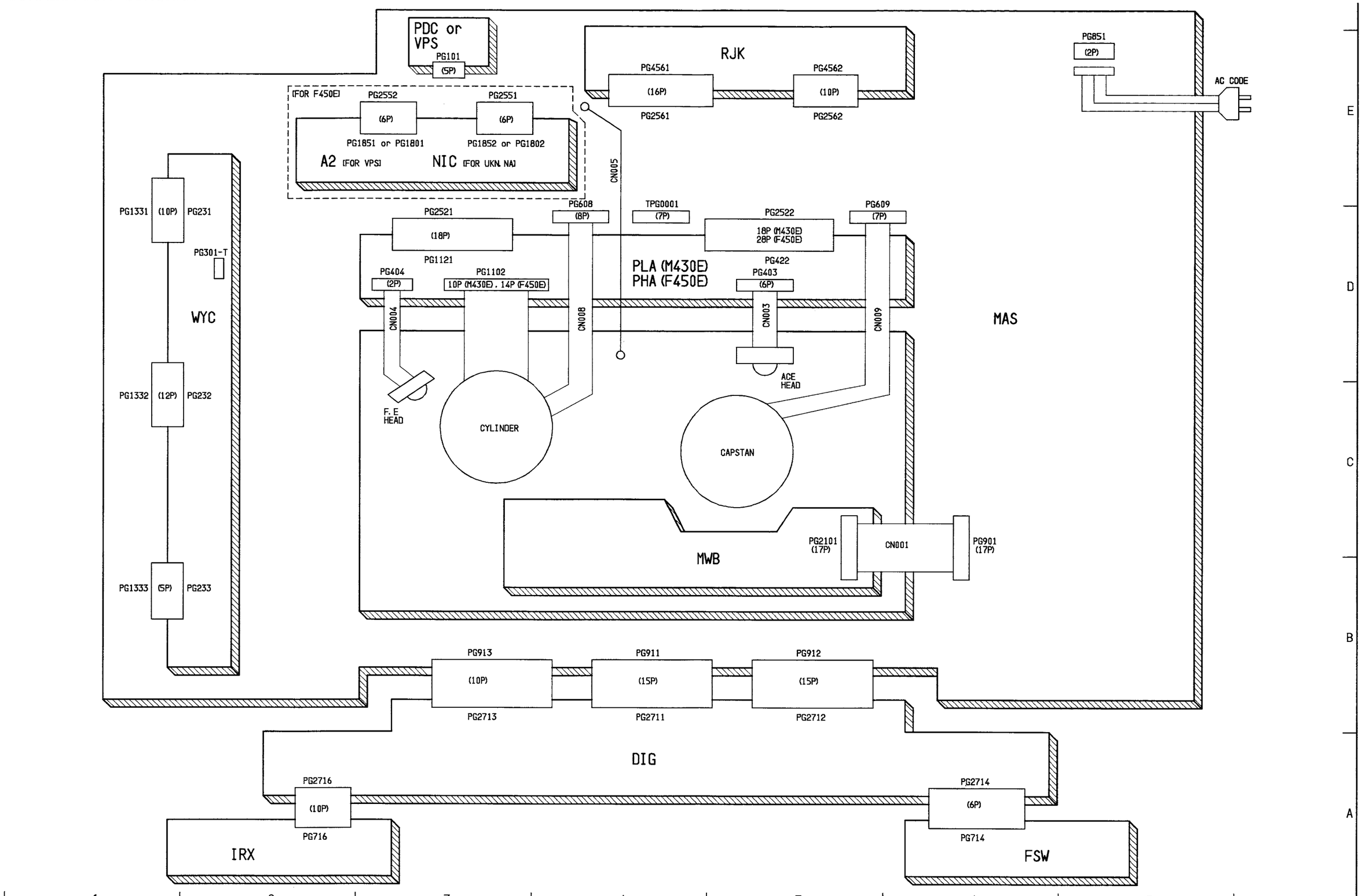
IDENTIFICATION OF PARTS LOCATION

Symbol No.	Parts Location
C201	A-2B
C202	B-3B
C203	A-4A

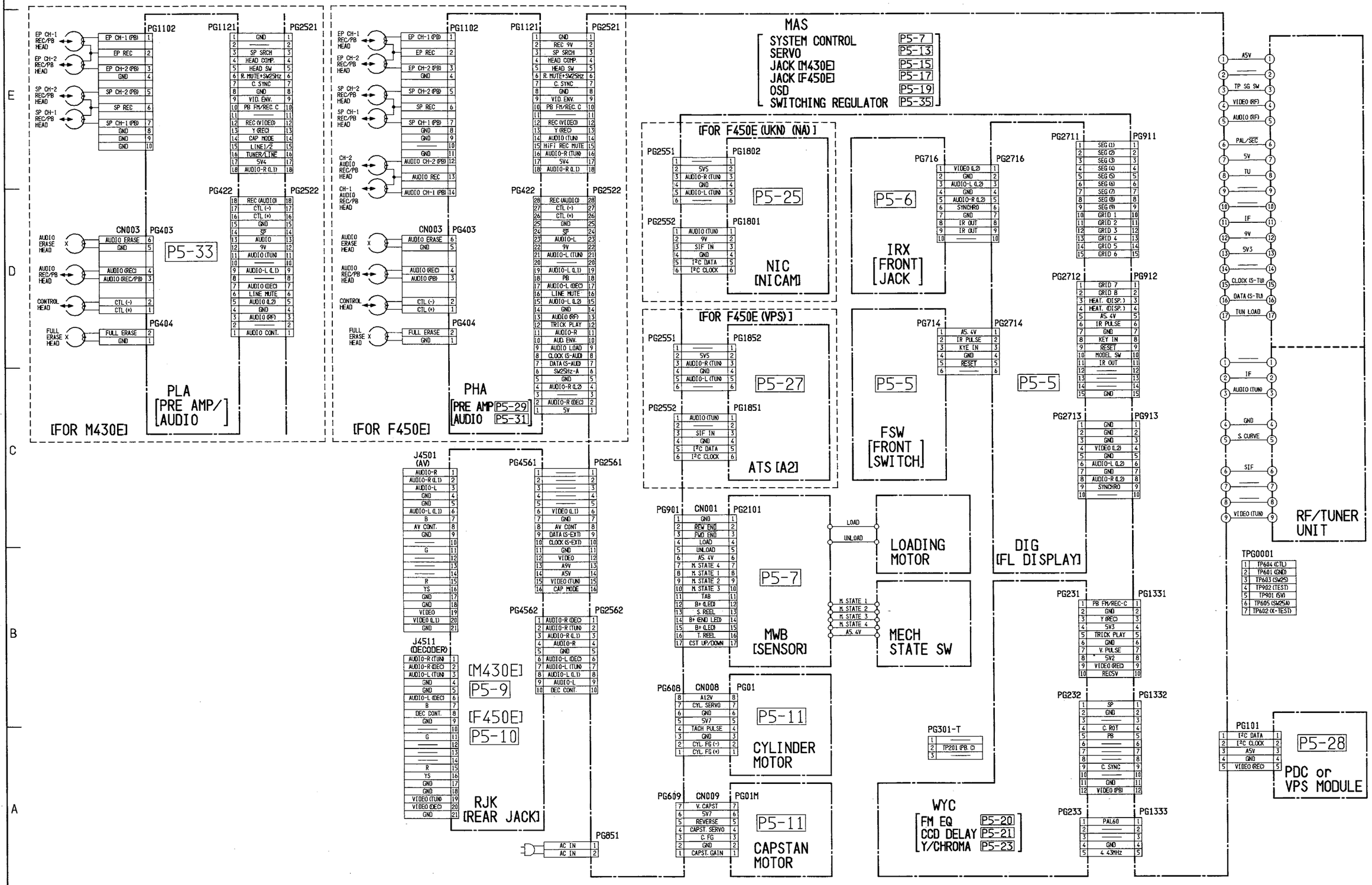
Symbol No.	Parts Location
R201	B-5C
R202	A-5B
Q216	A-9C



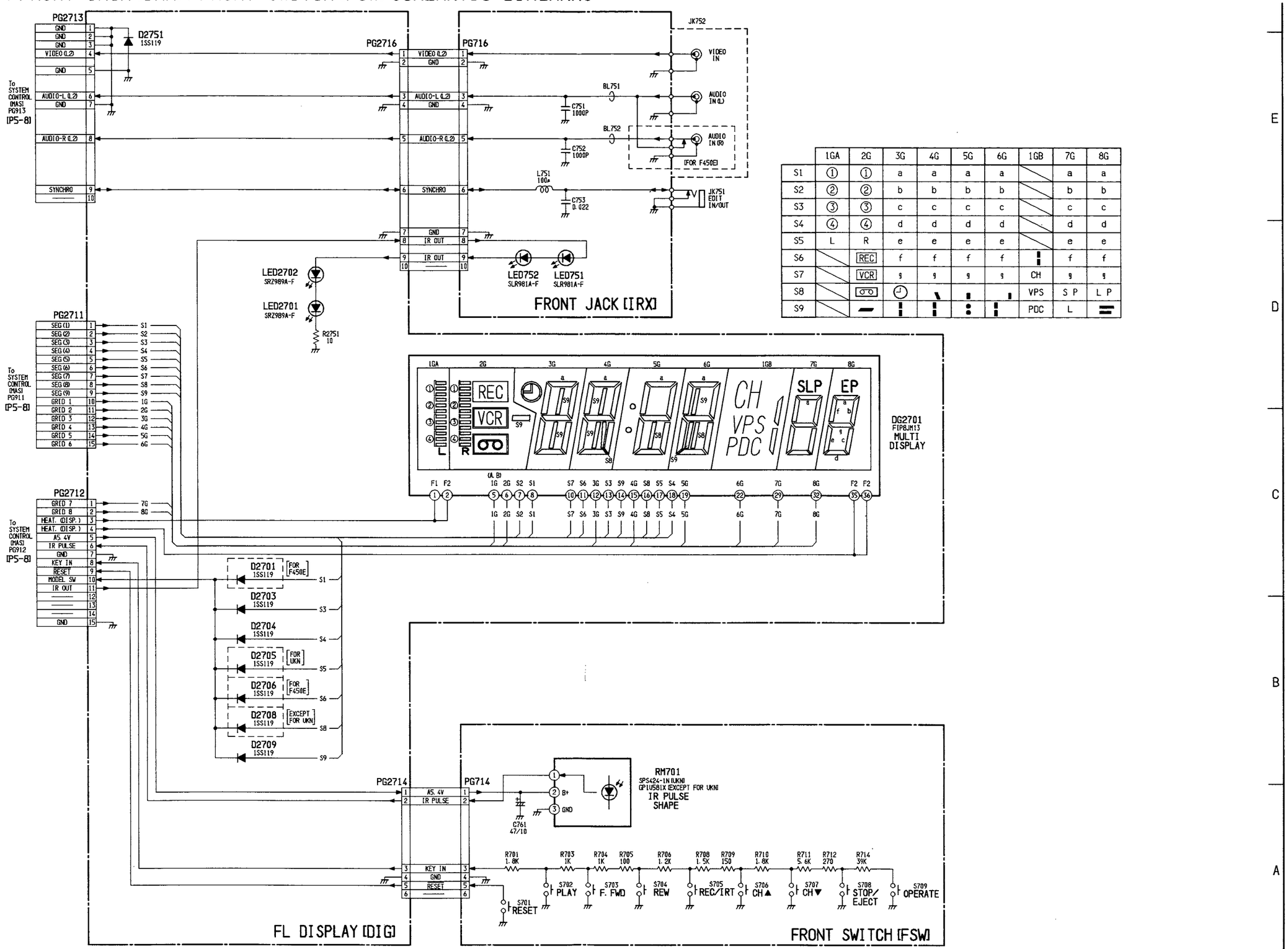
CONNECTION DIAGRAM



INTERNAL WIRING DIAGRAM

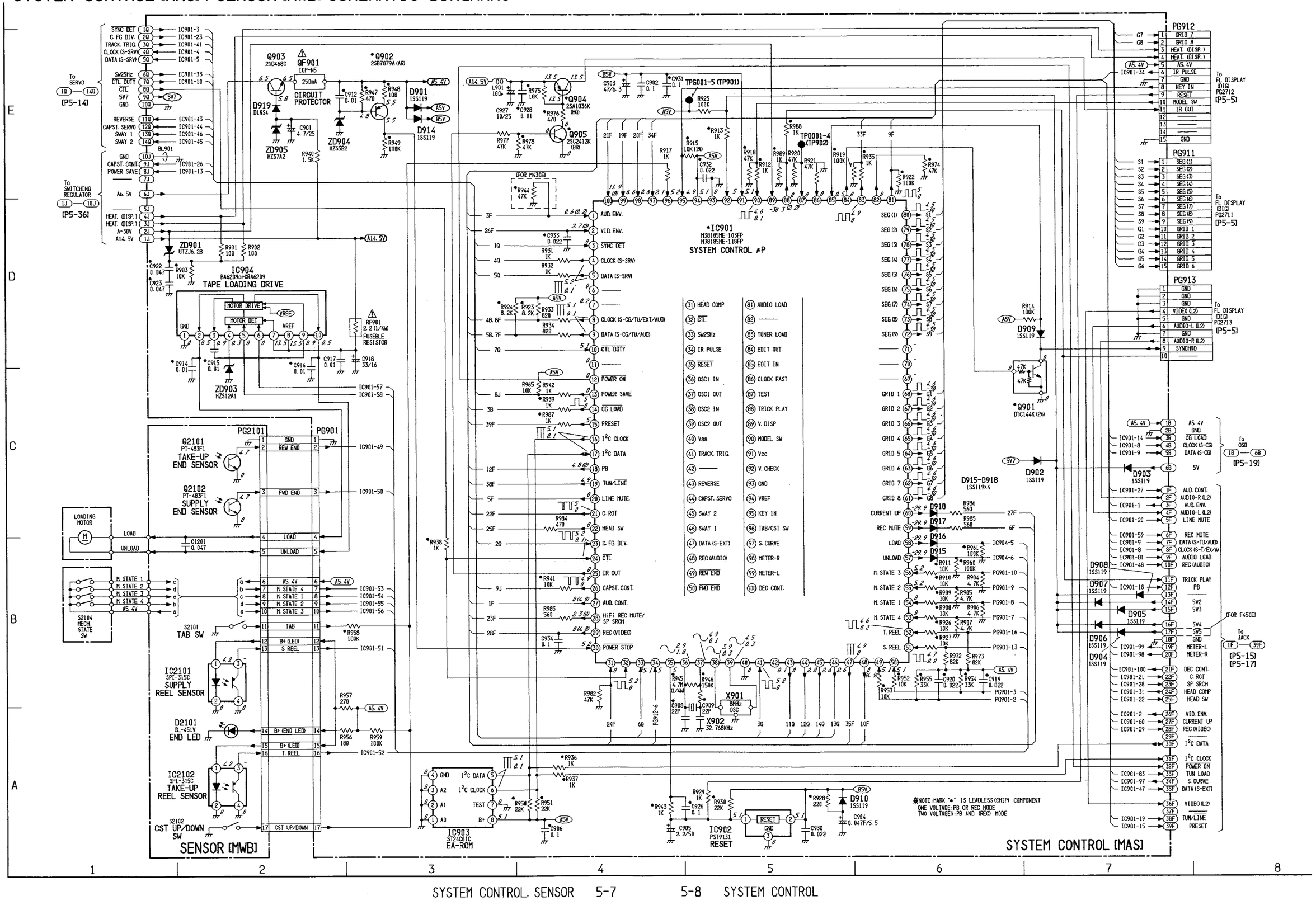


FL DISPLAY [DIG] . FRONT JACK [IRX] . FRONT SWITCH [FSW] SCHEMATIC DIAGRAMS

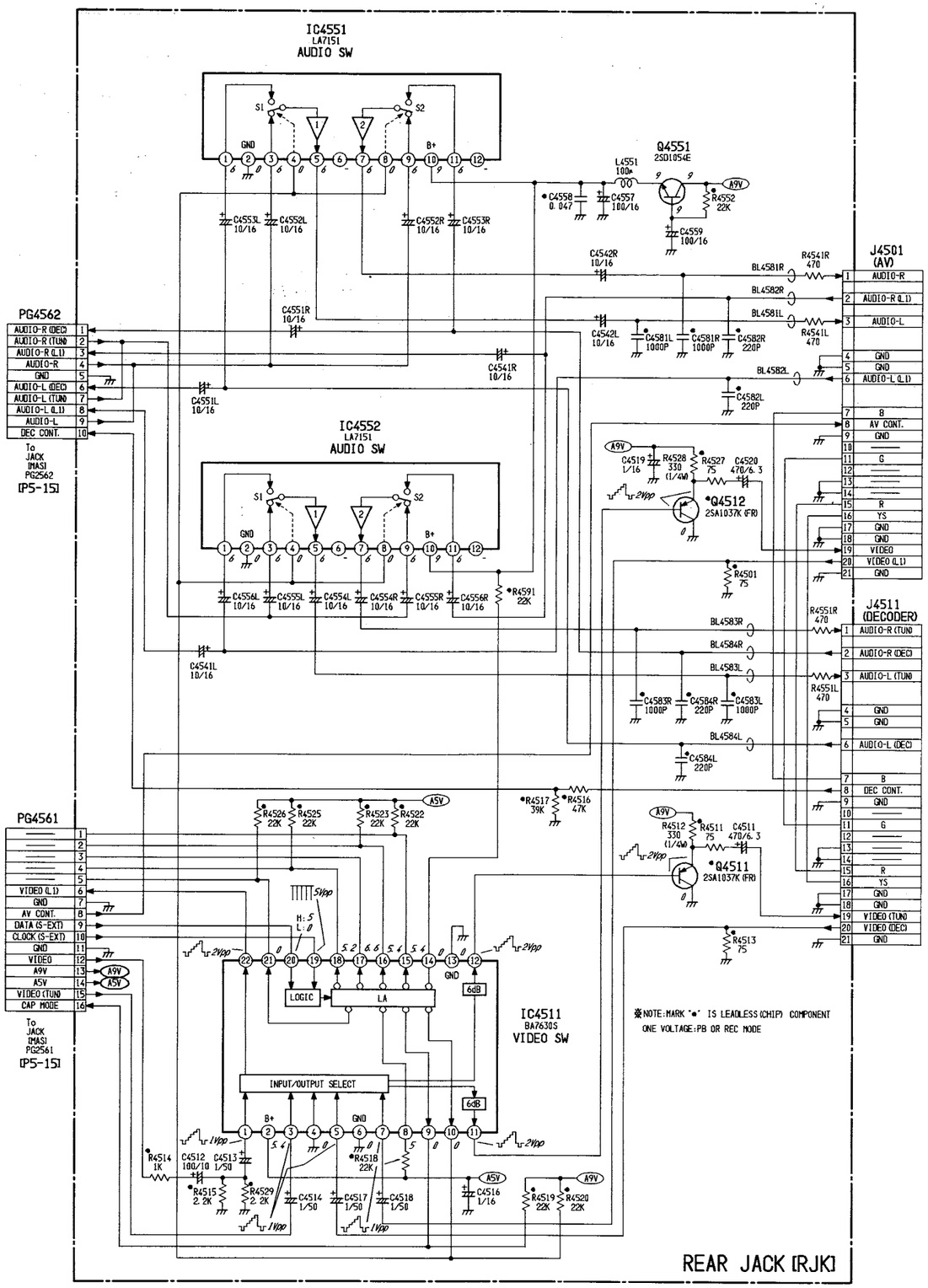


	1GA	2G	3G	4G	5G	6G	1GB	7G	8G
S1	①	①	a	a	a	a		a	a
S2	②	②	b	b	b	b		b	b
S3	③	③	c	c	c	c		c	c
S4	④	④	d	d	d	d		d	d
S5	L	R	e	e	e	e		e	e
S6		REC	f	f	f	f		f	f
S7		VCR	g	g	g	g	CH	g	g
S8							VPS	S P	L P
S9							PDC	L	

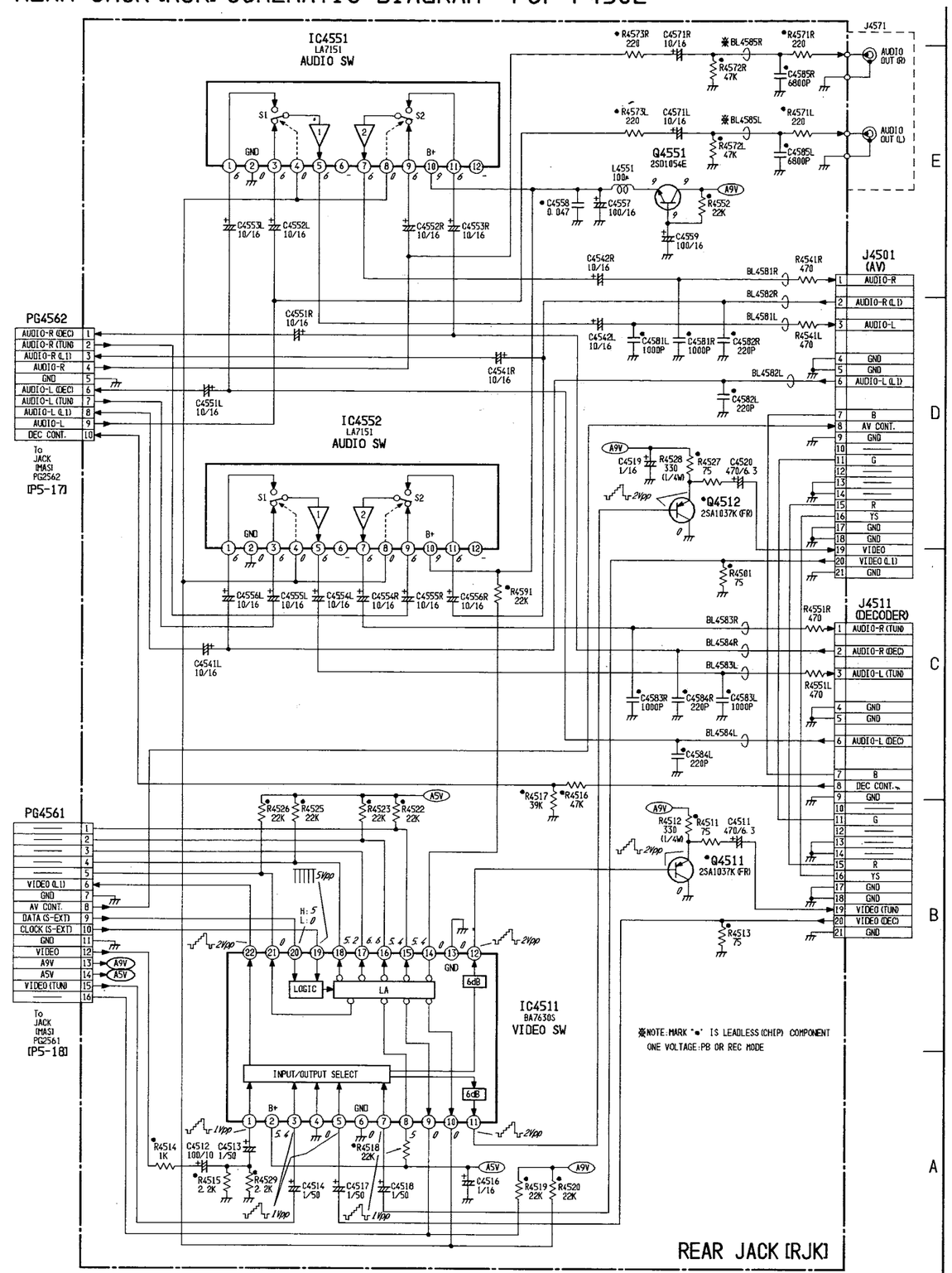
SYSTEM CONTROL [MAS], SENSOR [MWB] SCHEMATIC DIAGRAMS



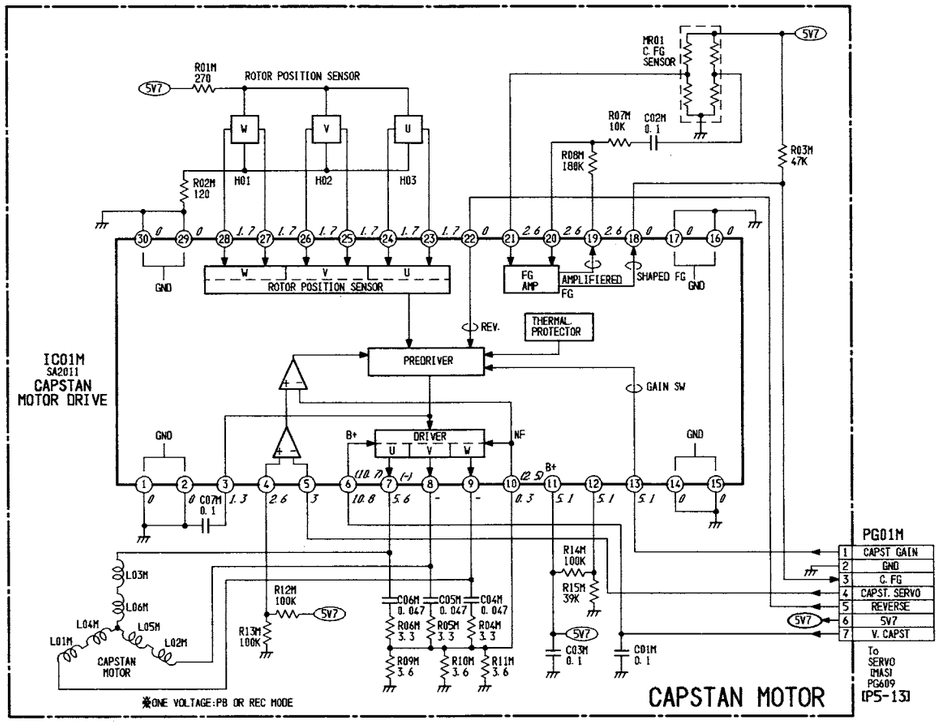
REAR JACK [RJK] SCHEMATIC DIAGRAM -For M430E-



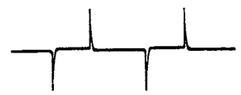
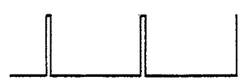
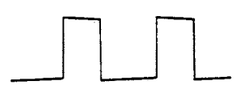
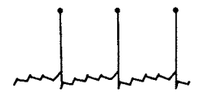
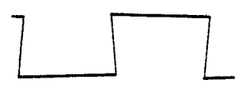
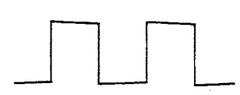
REAR JACK [RJK] SCHEMATIC DIAGRAM -For F450E-



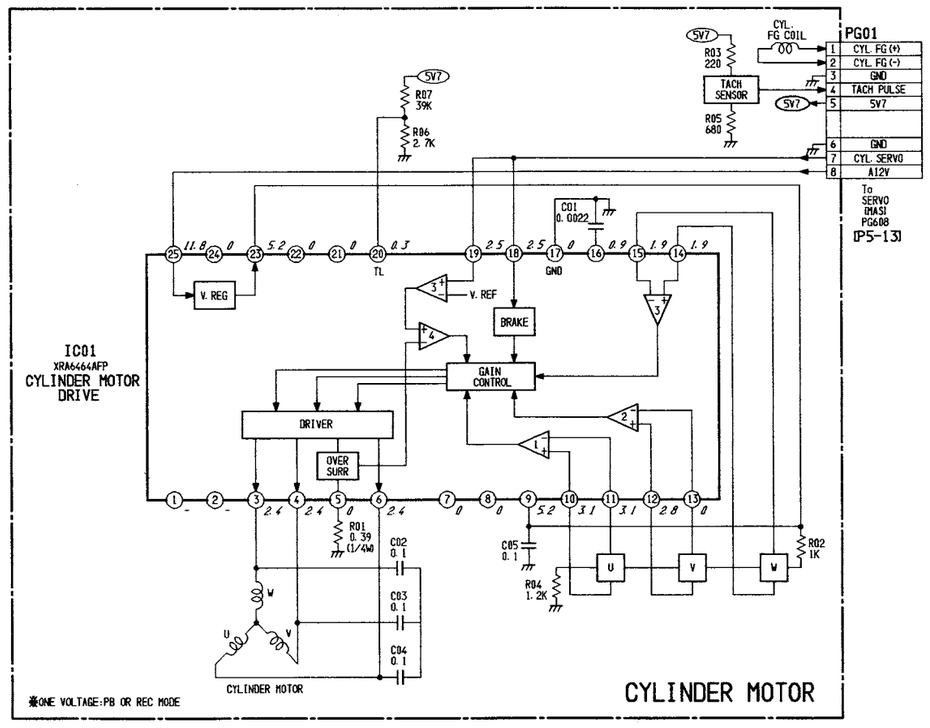
CAPSTAN MOTOR SCHEMATIC DIAGRAM



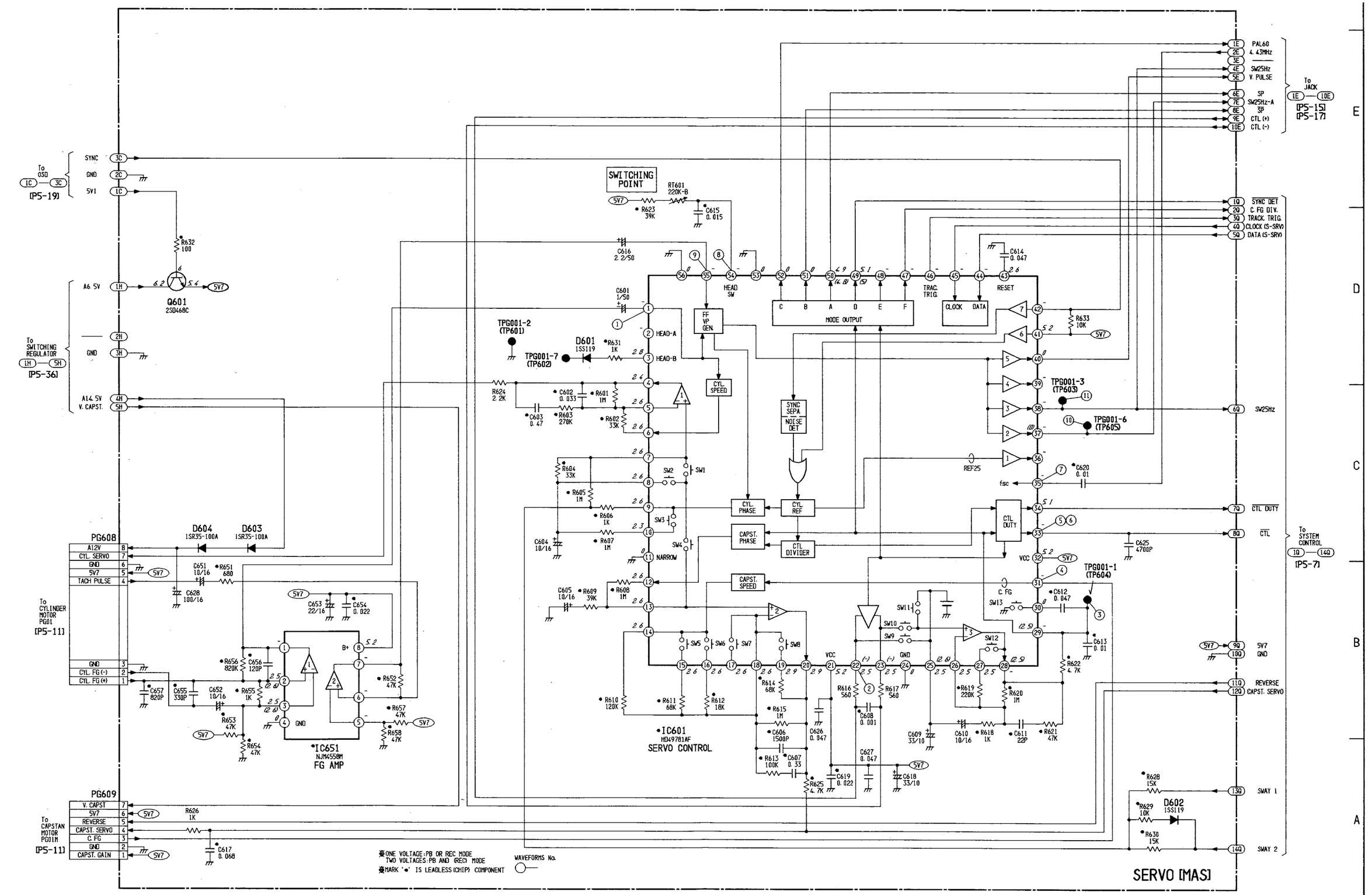
SERVO WAVEFORMS

1-A IC601-1 3.7Vp-p 1V/1.0msec. cm REC/PLAY	2-A IC601-22 4.6Vp-p 2V/10.0msec. cm REC	3-A TPG001-1 TP604 2.5Vp-p 500mV/10.0msec. cm PLAY	4-A IC601-31 4.0Vp-p 1V/200 μ sec. cm REC/PLAY
			
5-A IC601-33 5.7Vp-p 2V/10.0msec. cm REC	6-A IC601-33 6Vp-p 2V/10.0msec. cm PLAY	7-A IC601-35 630mVp-p 0.2V/200nsec. cm REC/PLAY	8-A IC601-54 2.8Vp-p 0.5V/5.0msec. cm REC/PLAY
			
9-A IC601-55 2.5Vp-p 0.5V/10.0msec. cm REC/PLAY	10-A TPG001-6 TP605 6.3Vp-p 2V/5.0msec. cm REC/PLAY	11-A TPG001-3 TP603 6.3Vp-p 2V/10.0msec. cm REC/PLAY	
			

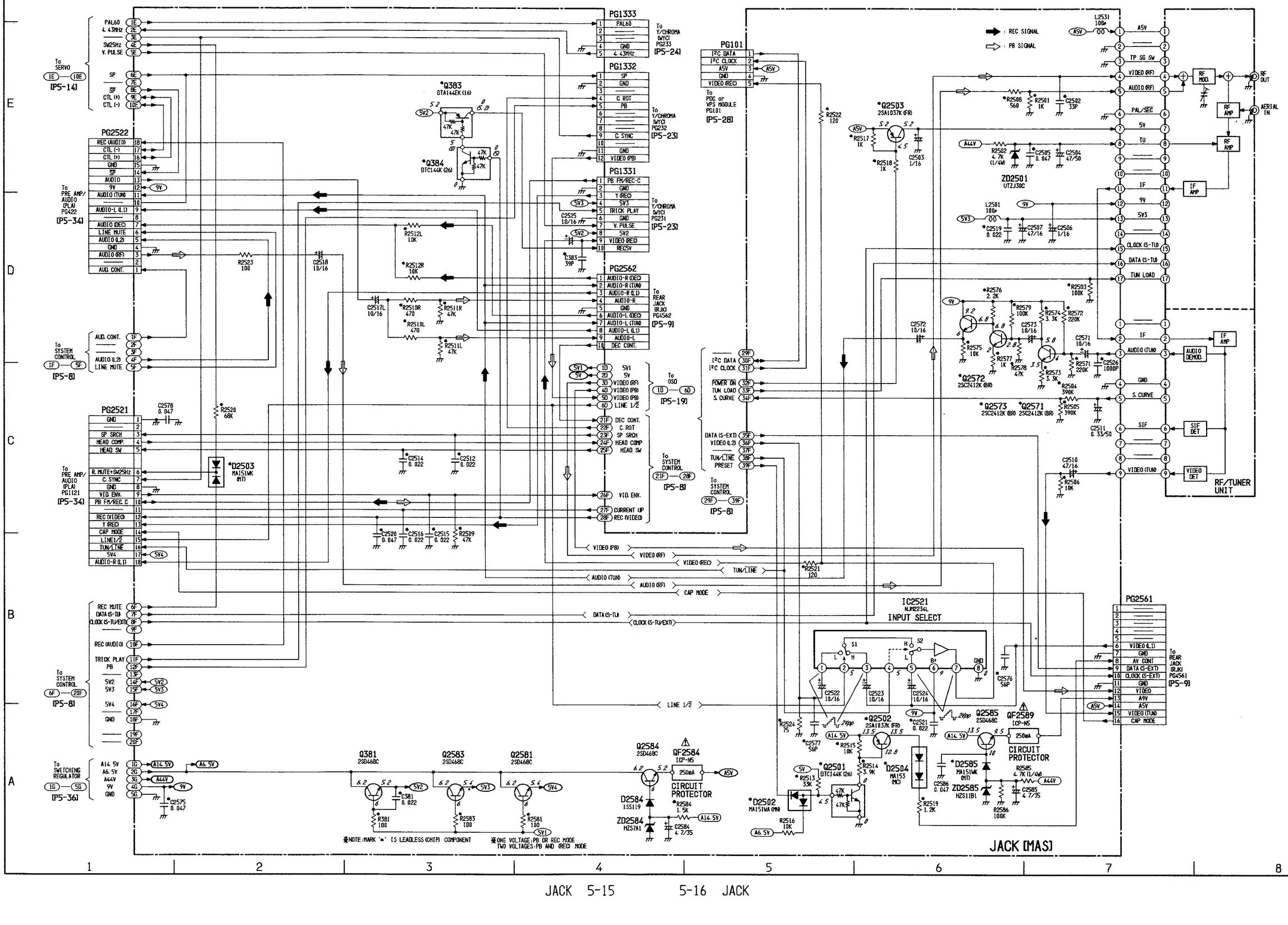
CYLINDER MOTOR SCHEMATIC DIAGRAM



SERVO [MAS] SCHEMATIC DIAGRAM

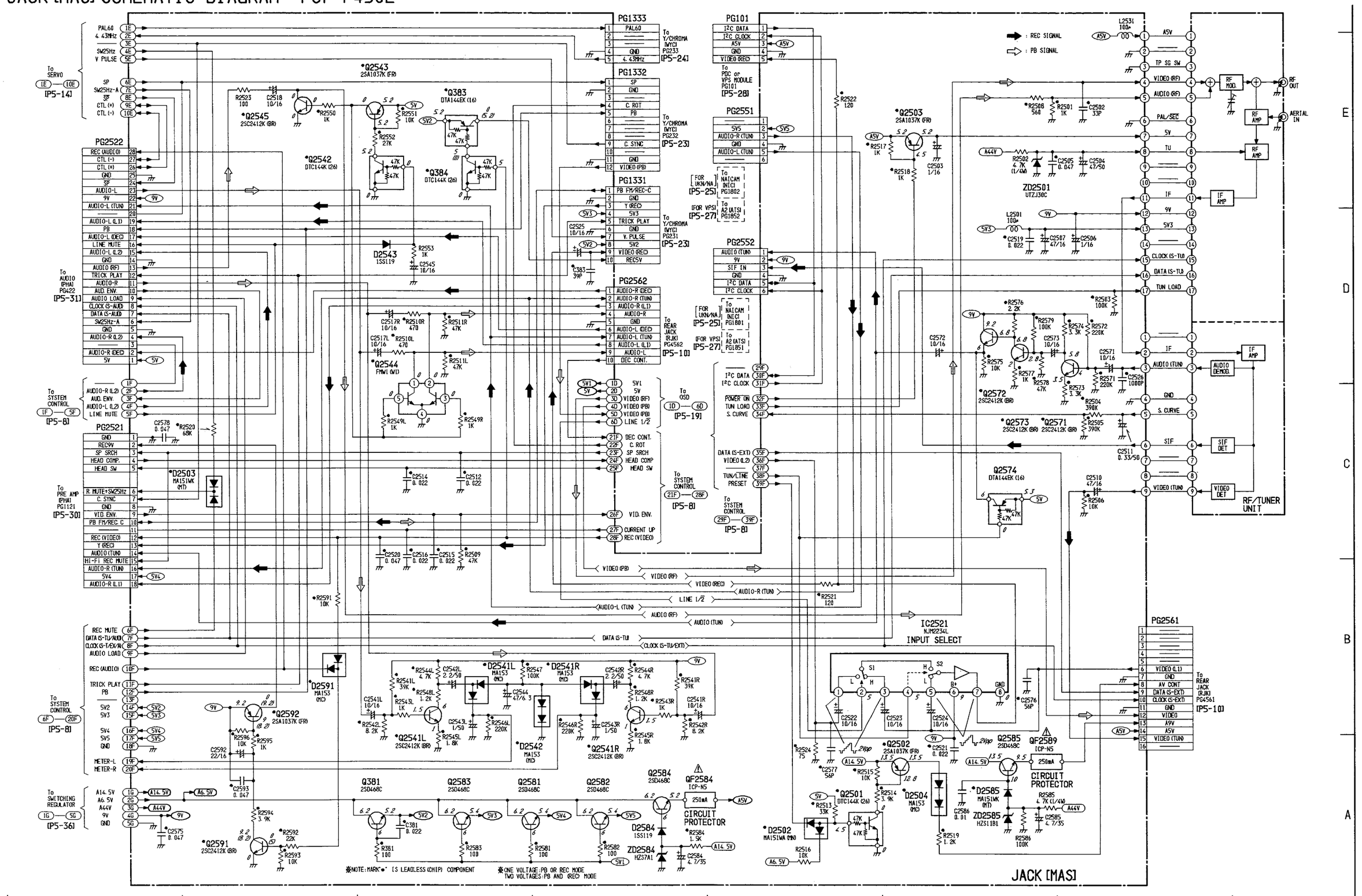


JACK [MAS] SCHEMATIC DIAGRAM -For M430E-



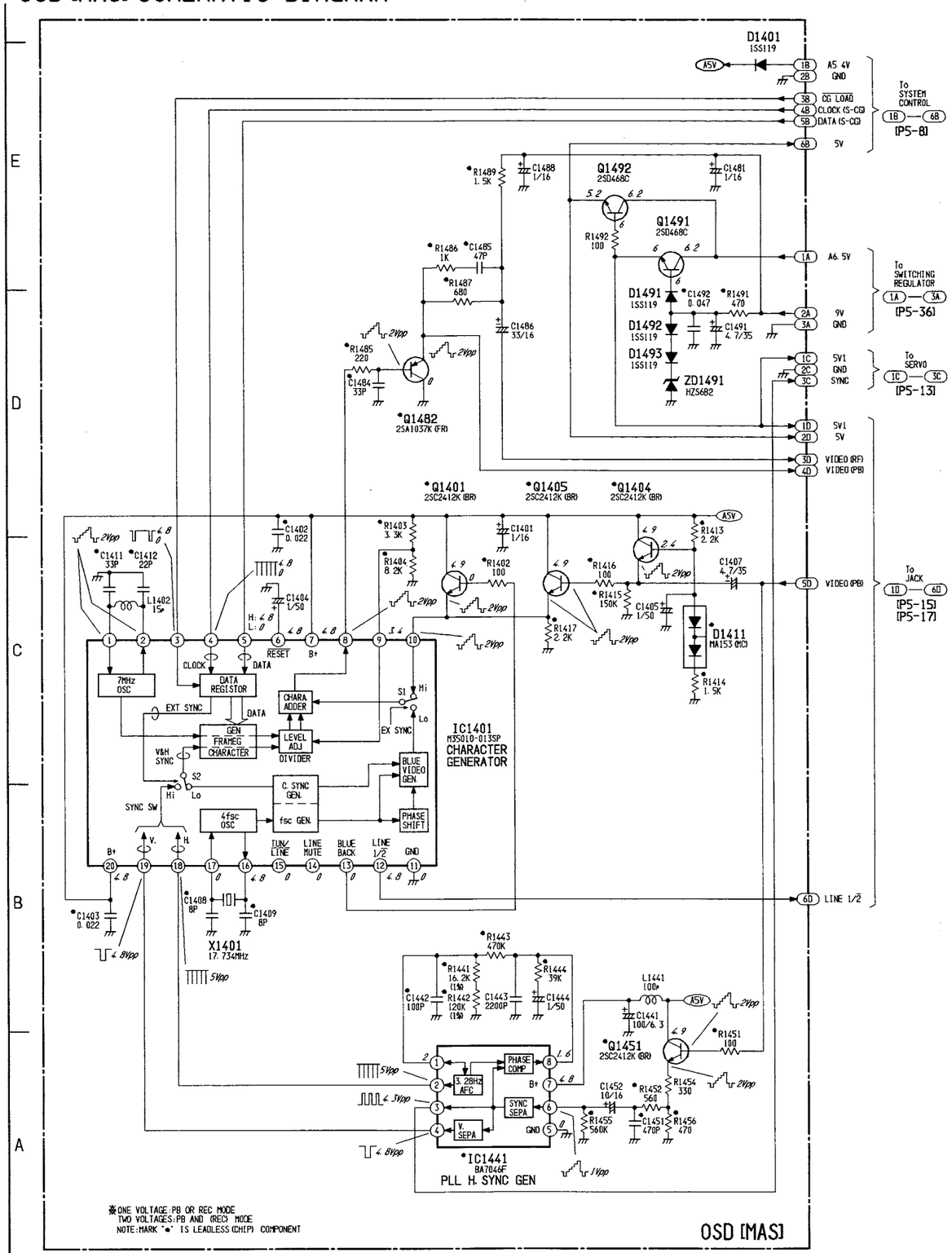
JACK 5-15 5-16 JACK

JACK [MAS] SCHEMATIC DIAGRAM -For F450E-

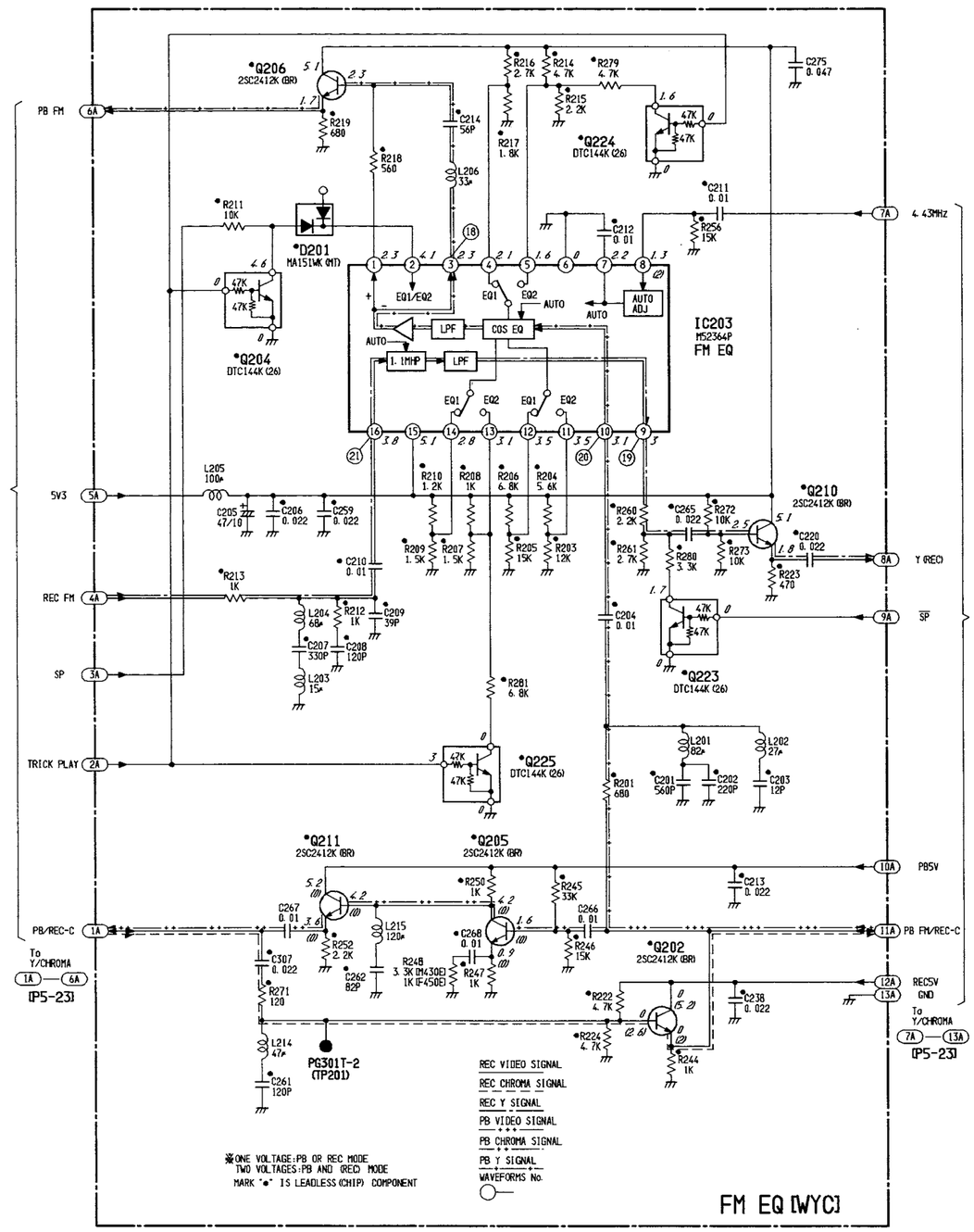


JACK 5-17 5-18 JACK

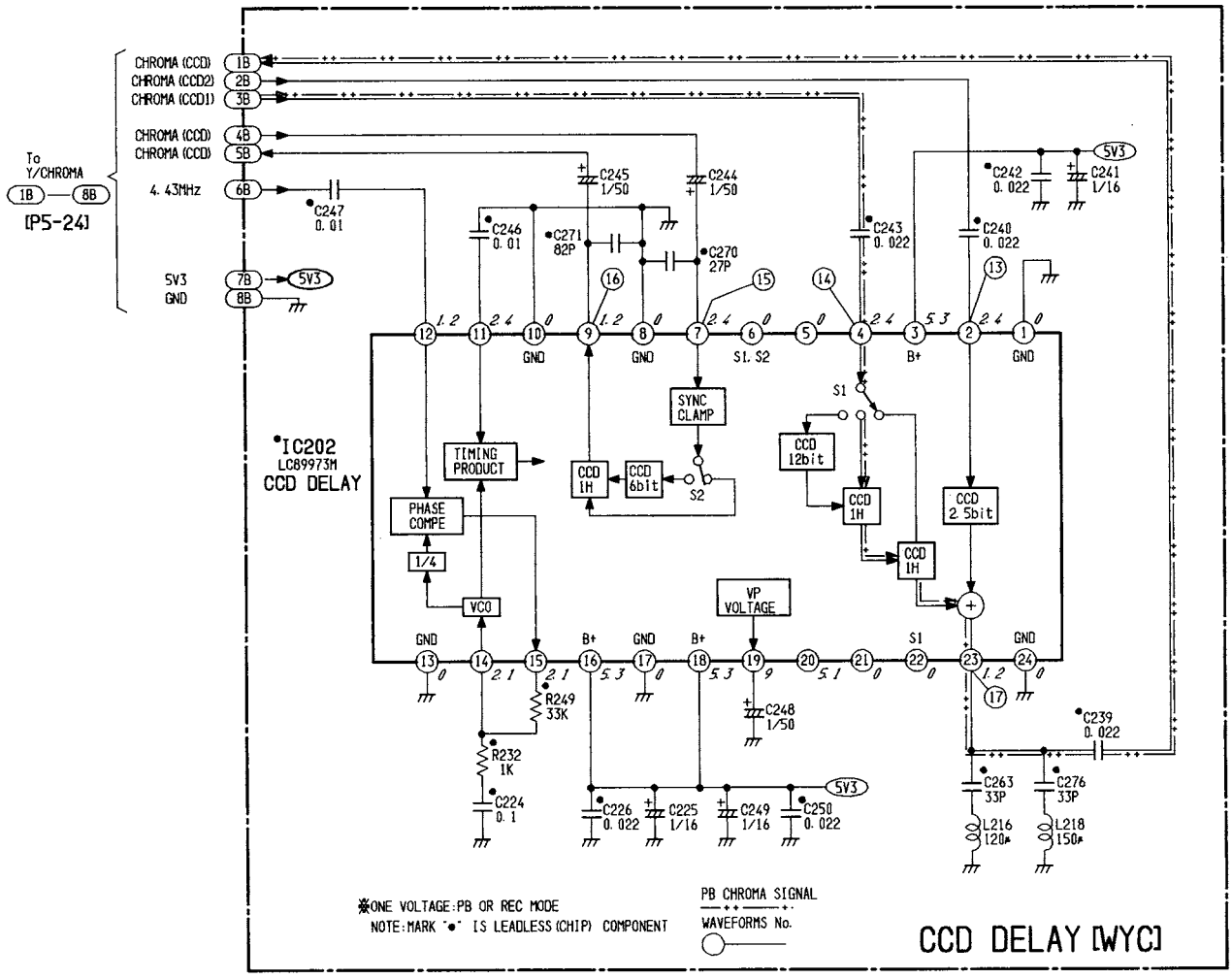
OSD [MAS] SCHEMATIC DIAGRAM



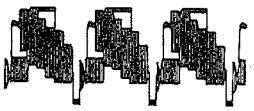
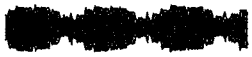
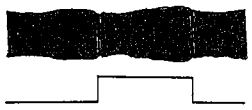
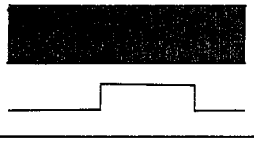
FM EQ [WYC] SCHEMATIC DIAGRAM



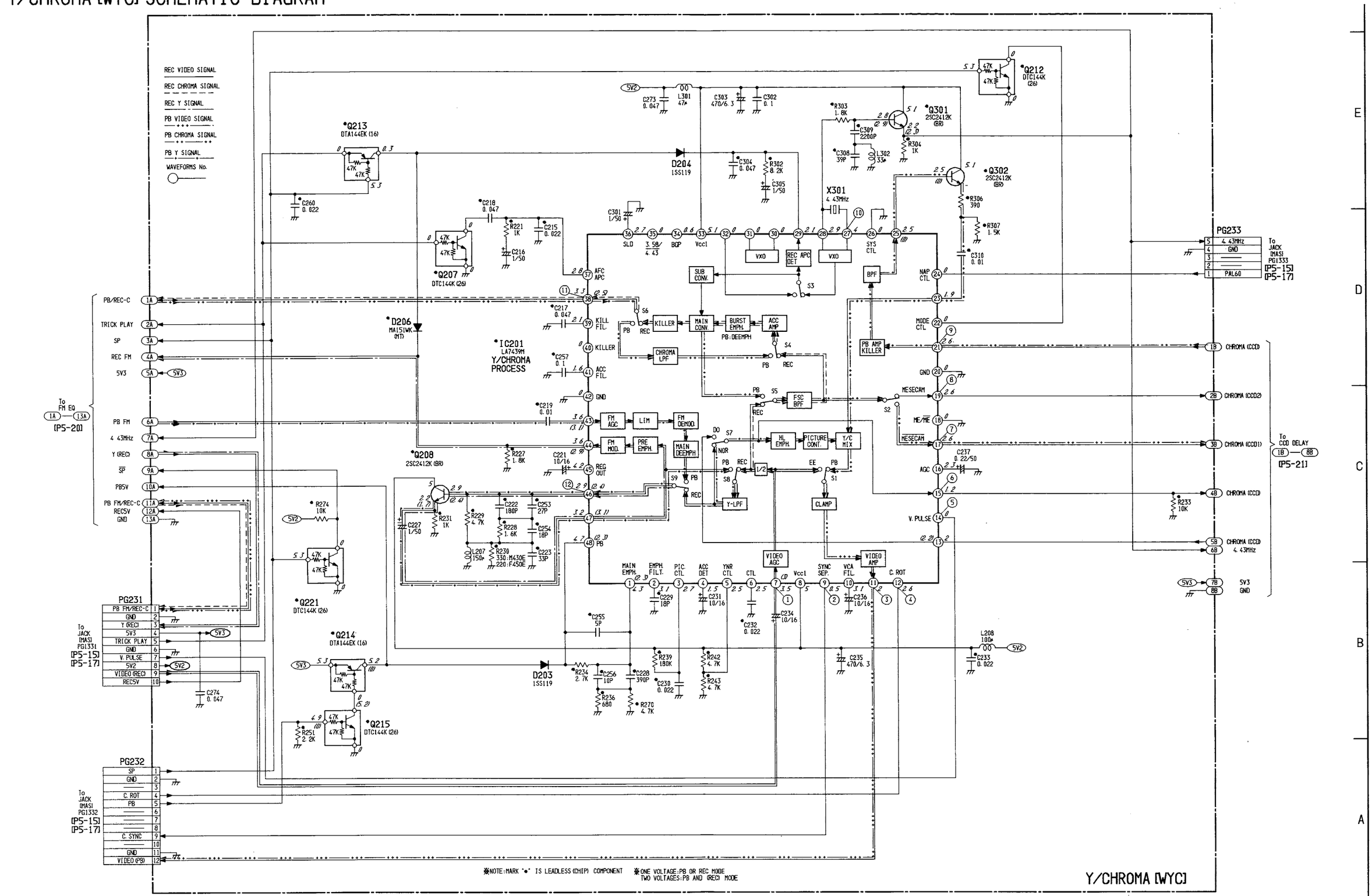
CCD DELAY [WYC] SCHEMATIC DIAGRAM



Y/CHROMA WAVEFORMS

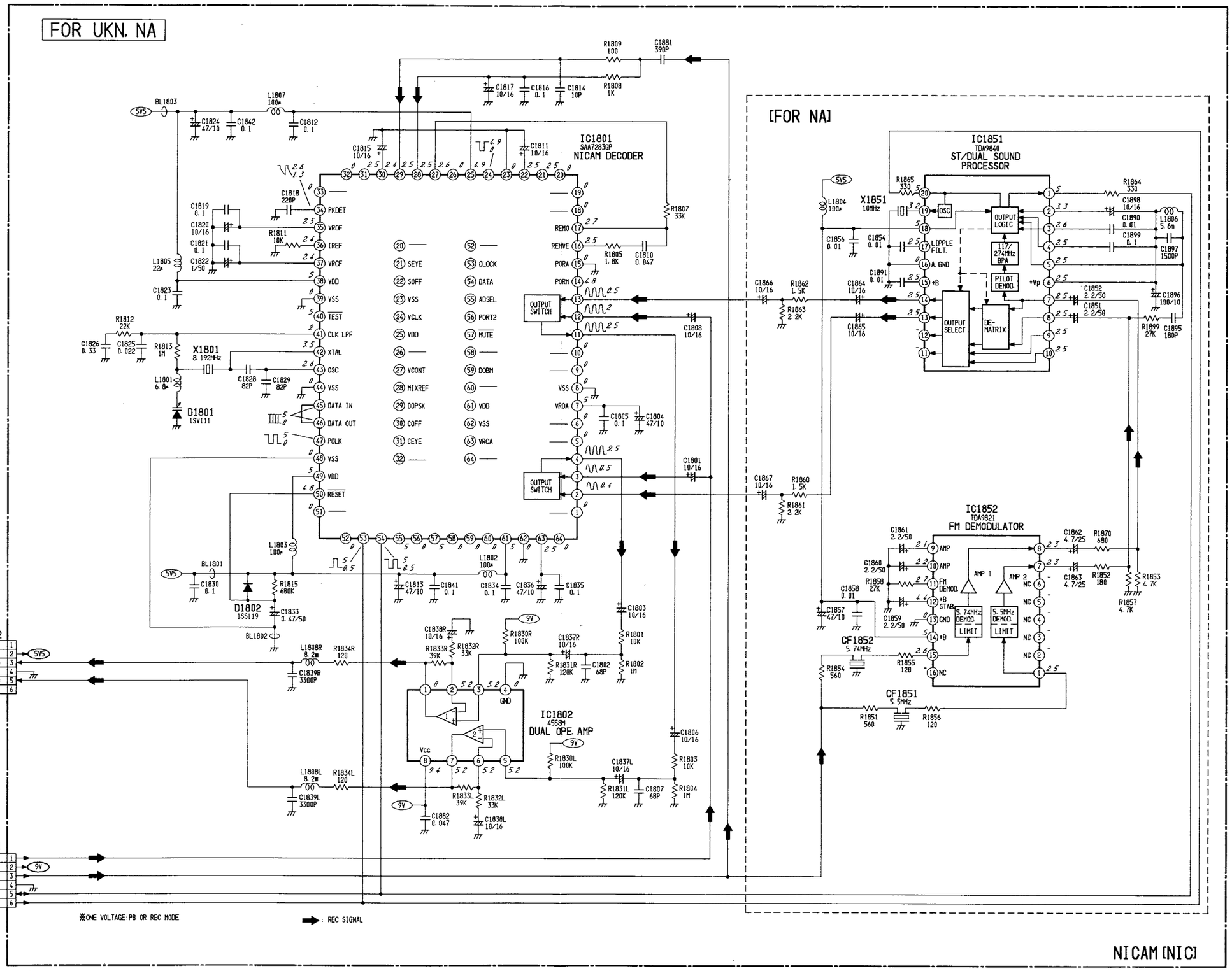
1-A IC201-7 1.0Vp-p 0.2V/20.0 μ sec. cm REC/PLAY	2-A IC201-9 4.5Vp-p 1V/20.0 μ sec. cm REC/PLAY	3-A IC201-11 2.2Vp-p 0.5V/20.0 μ sec. cm REC/PLAY	4-A IC201-12 6.0Vp-p 2V/10.0msec. cm REC/PLAY
			
5-A IC201-14 150mVp-p 50mV/20.0 μ sec. cm REC/PLAY	6-A IC201-15 450mVp-p 0.1V/20.0 μ sec. cm REC/PLAY	7-A IC201-17 530mVp-p 0.1V/20.0 μ sec. cm REC	7-B IC201-17 760mVp-p 0.2V/20.0 μ sec. cm PLAY
8-A IC201-19 350mVp-p 0.1V/20.0 μ sec. cm REC	8-B IC201-19 810mVp-p 0.2V/20.0 μ sec. cm PLAY	9-A IC201-21 120mVp-p 50mV/20.0 μ sec. cm REC	9-B IC201-21 300mVp-p 0.1V/20.0 μ sec. cm PLAY
10-A IC201-27 600mVp-p 0.2V/20.0nsec. cm REC/PLAY	11-A IC201-38 560mVp-p 0.1V/20.0 μ sec. cm REC	11-B IC201-38 1.2Vp-p 0.5V/20.0 μ sec. cm PLAY	12-A IC201-46 550mVp-p 0.1V/20.0 μ sec. cm REC/PLAY
			
13-A IC202-2 340mVp-p 0.1V/20.0 μ sec. cm REC	13-B IC202-2 730mVp-p 0.2V/20.0 μ sec. cm PLAY	14-A IC202-4 570mVp-p 0.2V/20.0 μ sec. cm REC/PLAY	15-A IC202-7 470mVp-p 0.1V/20.0 μ sec. cm REC
15-B IC202-7 380mVp-p 0.1V/20.0 μ sec. cm PLAY	16-A IC202-9 420mVp-p 0.1V/20.0 μ sec. cm REC	16-B IC202-9 350mVp-p 0.1V/20.0 μ sec. cm PLAY	17-A IC202-23 400mVp-p 0.1V/20.0 μ sec. cm REC
17-B IC202-23 660mVp-p 0.2V/20.0 μ sec. cm PLAY	18-B IC203-3 260mVp-p 0.1V/5.0msec. cm PLAY	19-A IC203-9 760mVp-p 0.2V/20.0 μ sec. cm REC	20-B IC203-10 160mVp-p 50mV/20.0 μ sec. cm PLAY
			
21-A IC203-16 570mVp-p 0.2V/5.0msec. cm REC			
			

Y/CHROMA [WYC] SCHEMATIC DIAGRAM



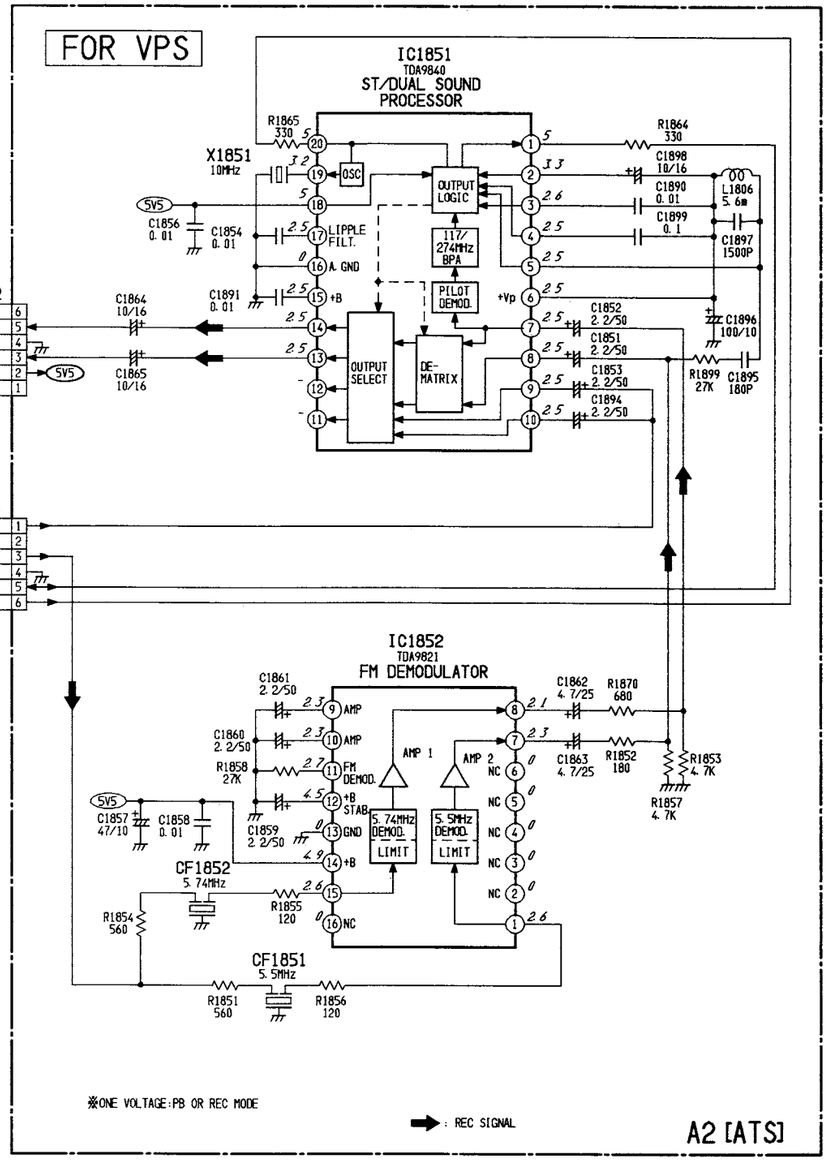
Y/CHROMA [WYC]

NICAM [NIC] SCHEMATIC DIAGRAM -For F450E (UKN). (NA) -

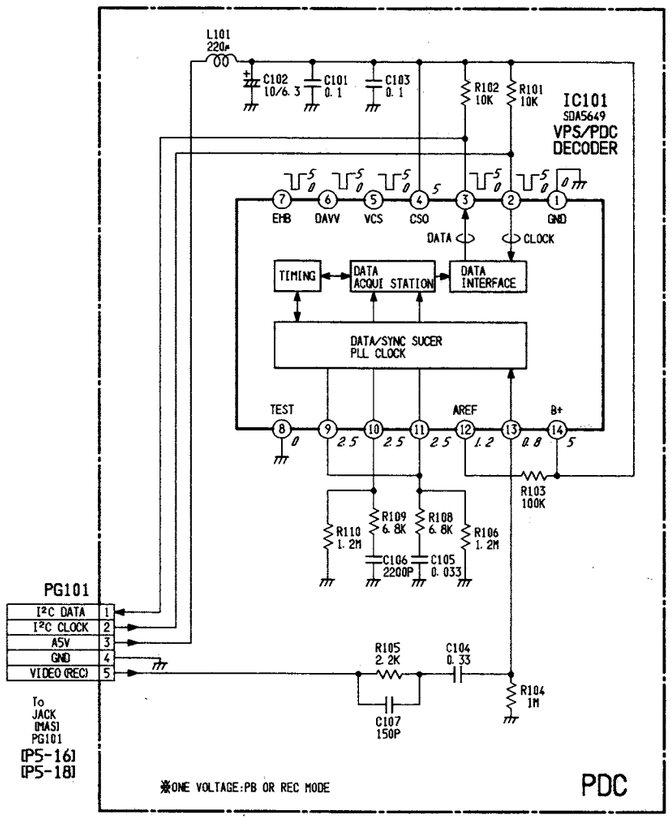


NICAM 5-25 5-26 NICAM

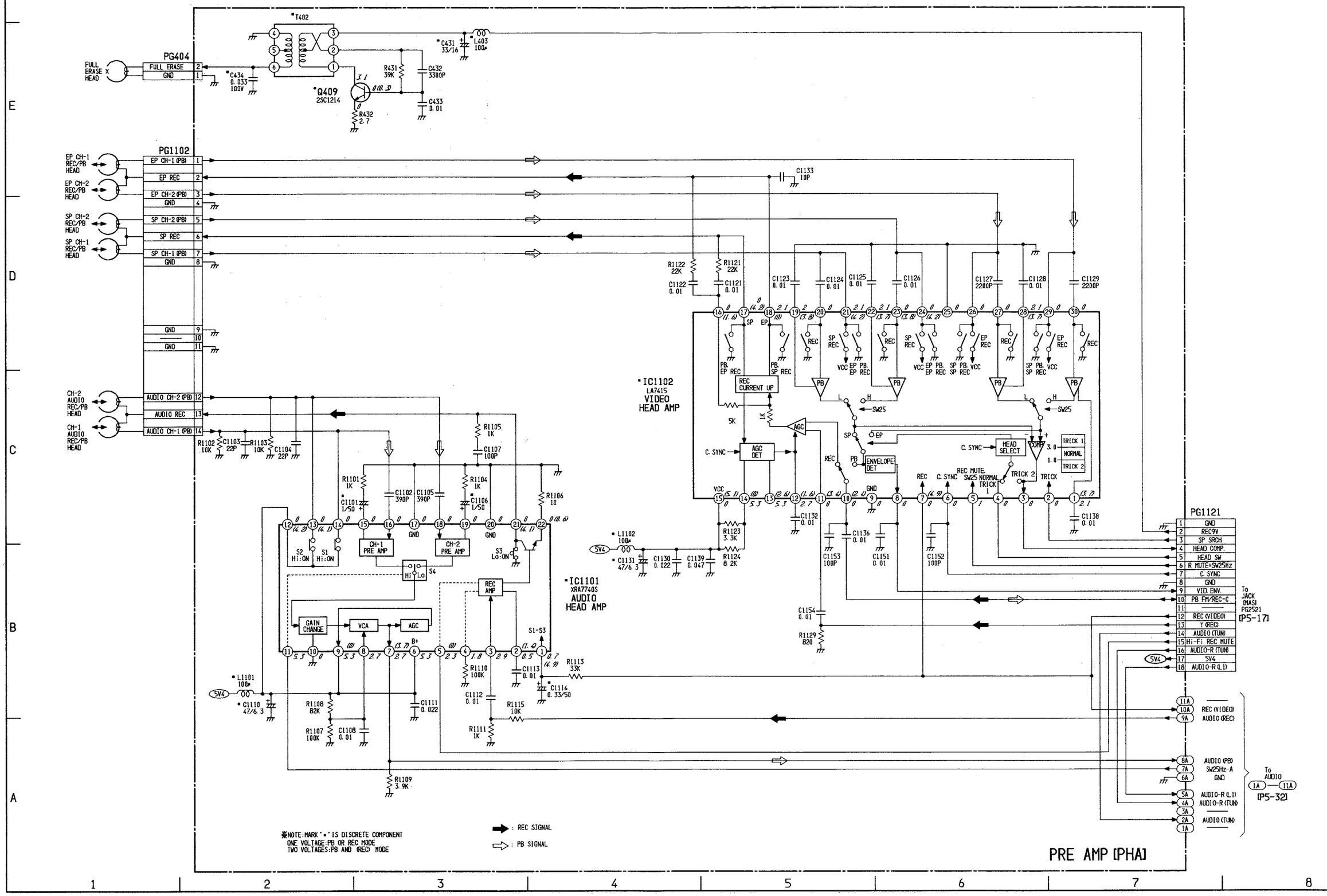
A2 [ATS] SCHEMATIC DIAGRAM -For F450E-



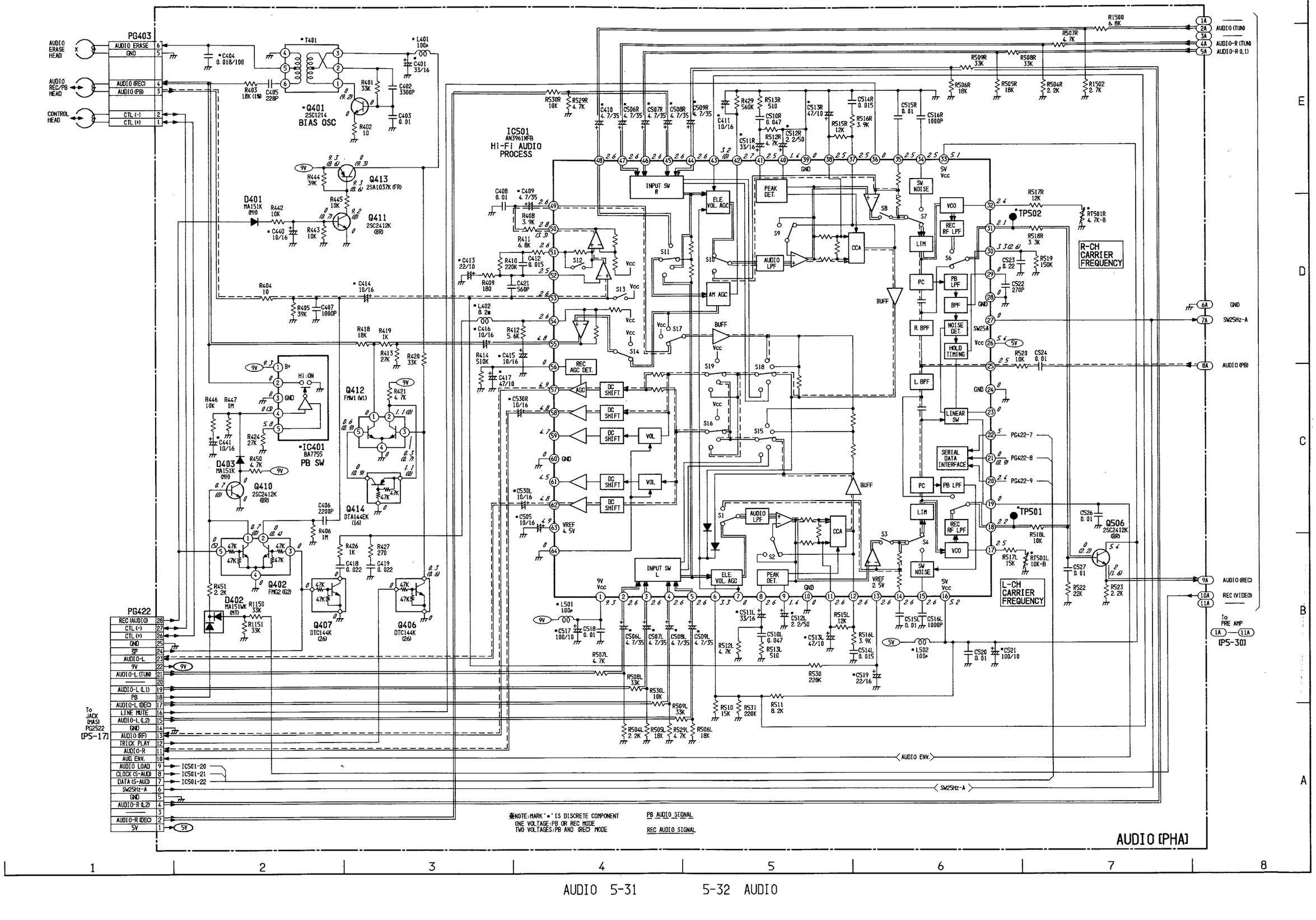
PDC SCHEMATIC DIAGRAM



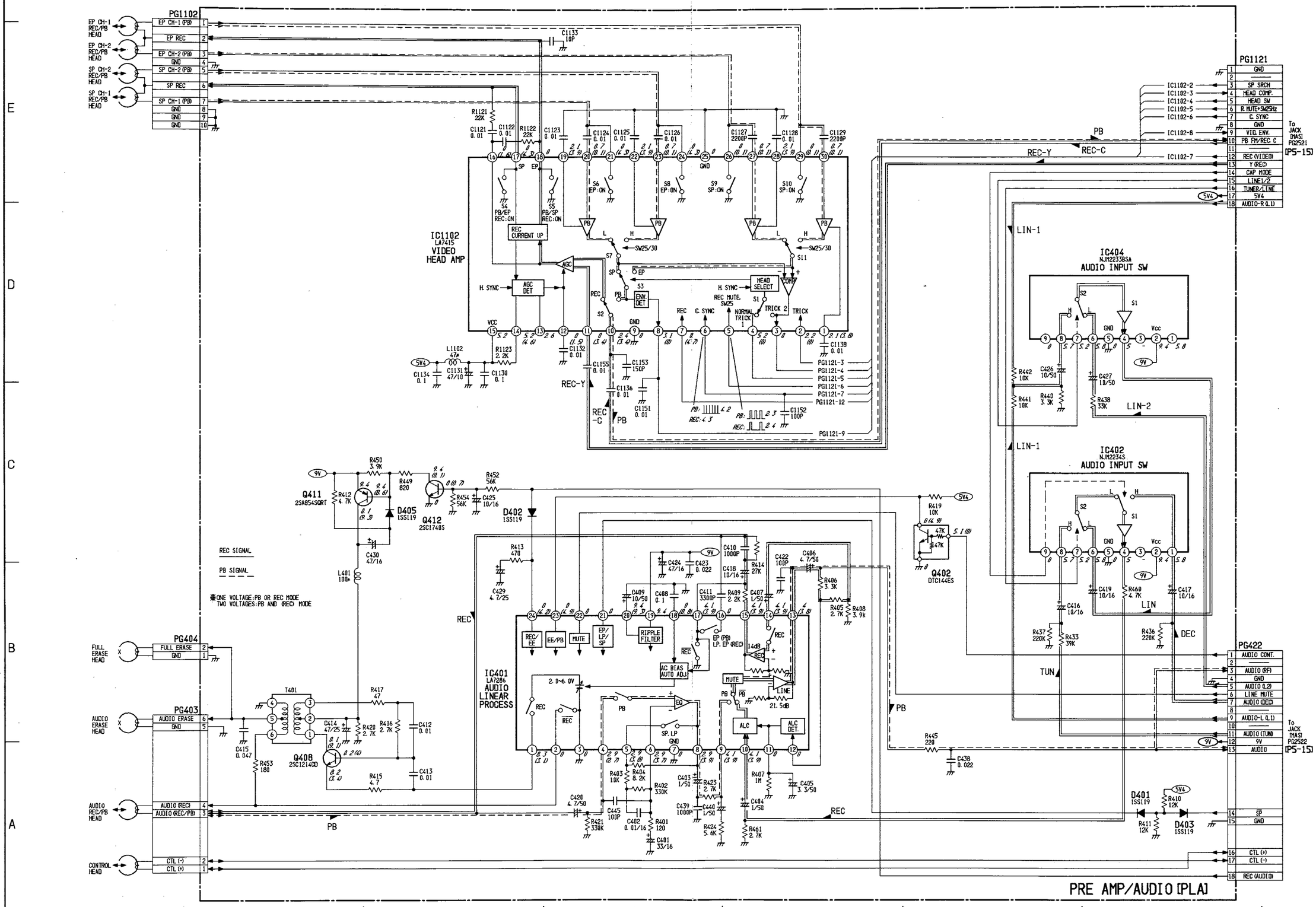
PRE AMP [PHA] SCHEMATIC DIAGRAM -For F450E-



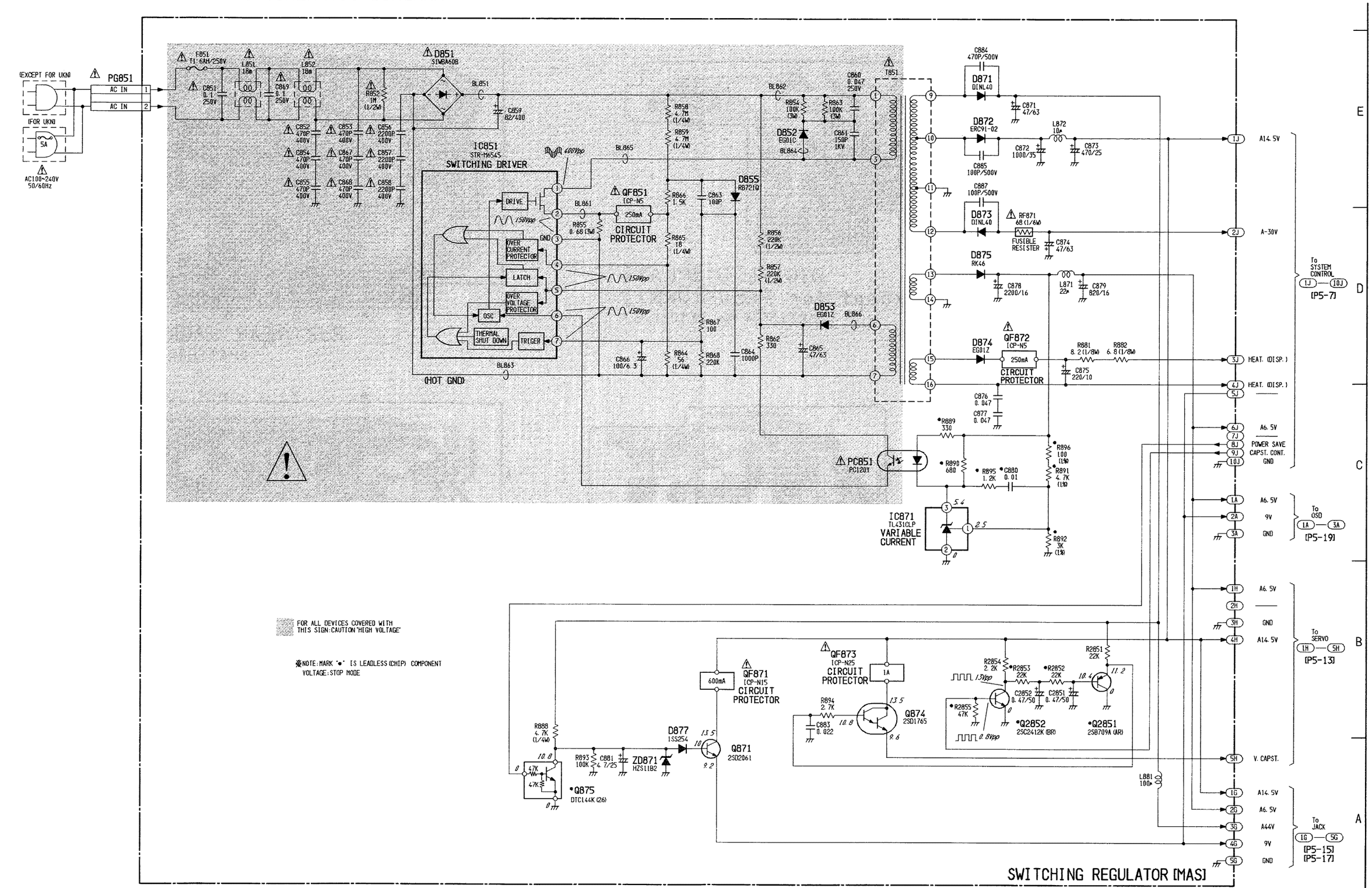
AUDIO [PHA] SCHEMATIC DIAGRAM -For F450E-



PRE AMP/AUDIO [PLA] SCHEMATIC DIAGRAM -For M430E-

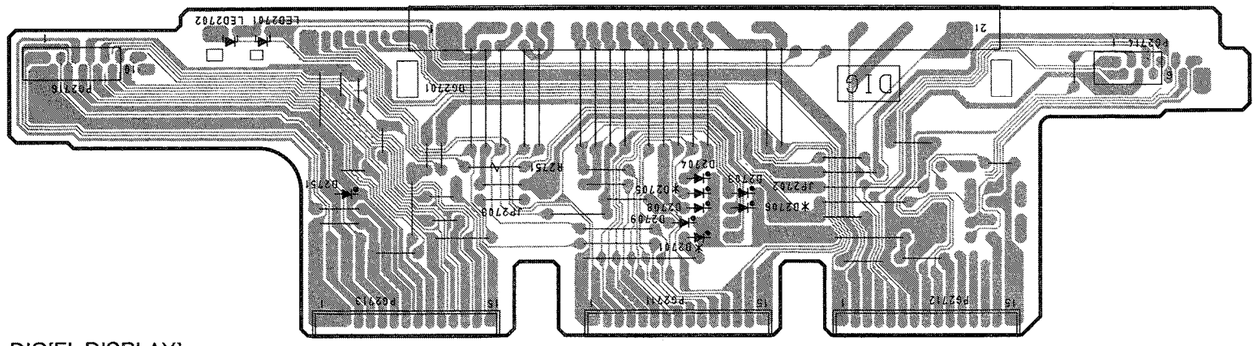


SWITCHING REGULATOR [MAS] SCHEMATIC DIAGRAM



SWITCHING REGULATOR 5-35 5-36 SWITCHING REGULATOR

DIG. FSW. IRX. RJK CIRCUIT BOARDS

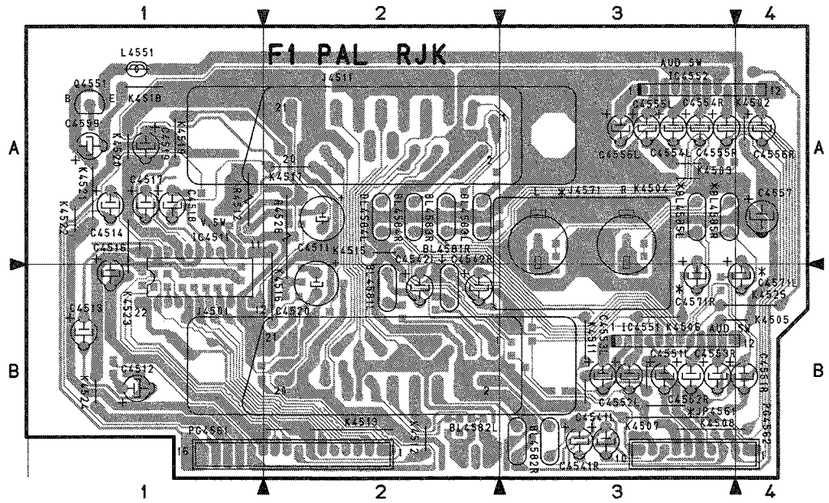


DIG[FL DISPLAY]
[Except for F450E(UKN)]
[PATTERN No.JK1011-6]

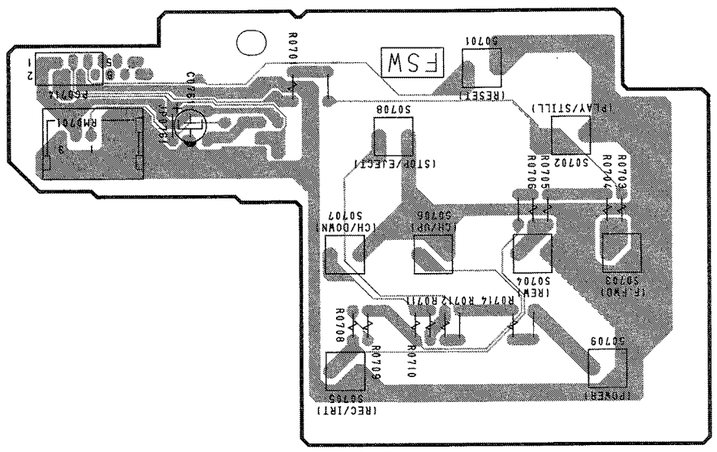
DIG[FL DISPLAY] DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

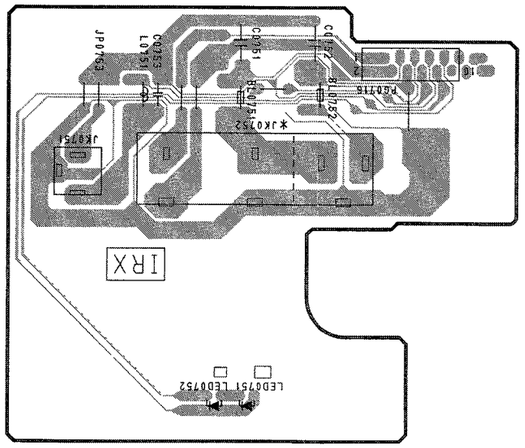
SYMBOL No.	M430E	F450E
D2701	×	○
D2706	×	○



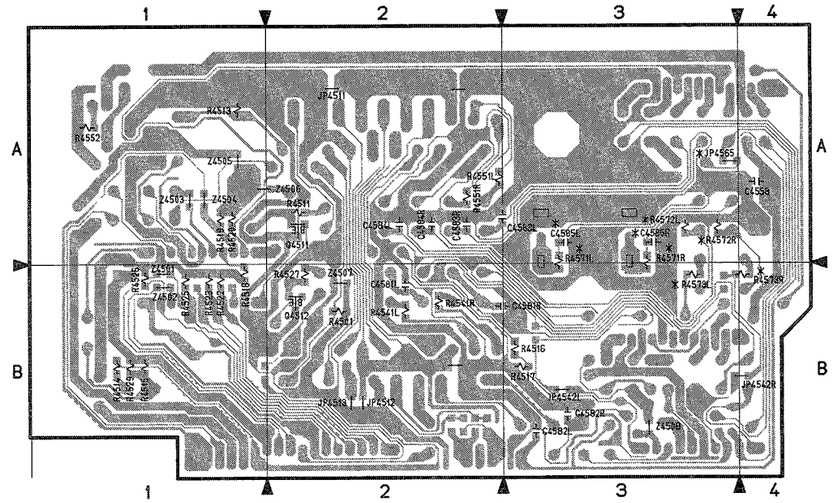
RJK[REAR JACK]-SIDE A-
[PATTERN No.JA1185-1]



FSW[FRONT SW]
[Except for F450E(UKN)]
[PATTERN No.JK1011-6]



IRX[FRONT JACK]
[Except for F450E(UKN)]
[PATTERN No.JK1011-6]



RJK[REAR JACK]-SIDE B-
[PATTERN No.JA1185-1]

RJK[REAR JACK] – SIDE A – DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

SYMBOL No.	M430E	F450E
BL4585L,R	×	○
C4571L,R	×	○
J4571	×	○
JP4561	○	×

RJK[REAR JACK] – SIDE B – DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

SYMBOL No.	M430E	F450E
C4585L,R	×	○
JP4565	○	×
R4571L,R	×	○
R4572L,R	×	○
R4573L,R	×	○

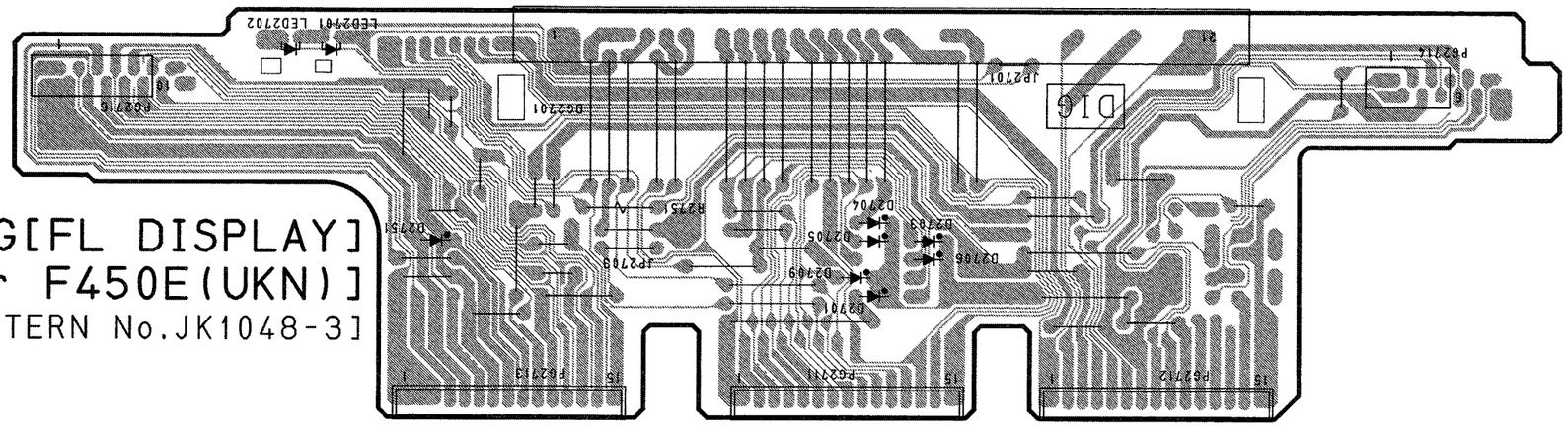
IDENTIFICATION OF PARTS LOCATION

RJK [REAR JACK]

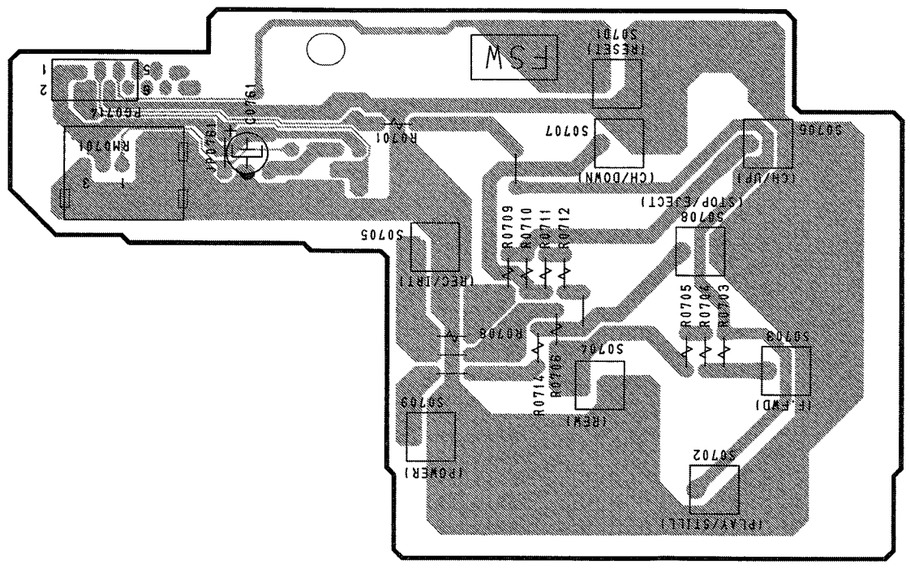
Symbol No.	Parts Location
BL	
BL4581L	A-2B
BL4581R	A-2B
BL4582L	A-3B
BL4582R	A-3B
BL4583L	A-2A
BL4583R	A-2A
BL4584L	A-2A
BL4584R	A-2A
BL4585L	A-3A
BL4585R	A-3A
C	
C4511	A-2A
C4512	A-1B
C4513	A-1B
C4514	A-1A
C4516	A-1B
C4517	A-1A
C4518	A-1A
C4519	A-1A
C4520	A-2B
C4541L	A-3B
C4541R	A-3B
C4542L	A-2B
C4542R	A-2B
C4551L	A-3B
C4551R	A-4B
C4552L	A-3B
C4552R	A-3B
C4553L	A-3B
C4553R	A-3B
C4554L	A-3A
C4554R	A-3A
C4555L	A-3A
C4555R	A-3A
C4556L	A-3A
C4556R	A-4A
C4557	A-4A
C4558	B-4A
C4559	A-1A
C4571L	A-4B
C4571R	A-3B
C4581L	B-2B
C4581R	B-3B
C4582L	B-3B
C4582R	B-3B
C4583L	B-3A
C4583R	B-2A
C4584L	B-2A
C4584R	B-2A
C4585L	B-3A
C4585R	B-3A
IC	
IC4511	A-1B
IC4551	A-3B
IC4552	A-3A
J	

Symbol No.	Parts Location
J4501	A-2B
J4511	A-2A
J4571	A-3A
JP	
JP4561	A-3B
JP4565	B-3A
L	
L4551	A-1A
PG	
PG4561	A-2B
PG4562	A-3B
Q	
Q4511	B-2A
Q4512	B-2B
Q4551	A-1A
R	
R4501	B-2B
R4511	B-2A
R4512	A-1A
R4513	B-1A
R4514	B-1B
R4515	B-1B
R4516	B-3B
R4517	B-3B
R4518	B-1B
R4519	B-1A
R4520	B-1A
R4522	B-1B
R4523	B-1B
R4525	B-1B
R4526	B-1B
R4527	B-2B
R4528	A-2A
R4529	B-1B
R4541L	B-2B
R4541R	B-2B
R4551L	B-2A
R4551R	B-2A
R4552	B-1A
R4571L	B-3A
R4571R	B-3A
R4572L	B-3A
R4572R	B-3A
R4573L	B-3B
R4573R	B-4B

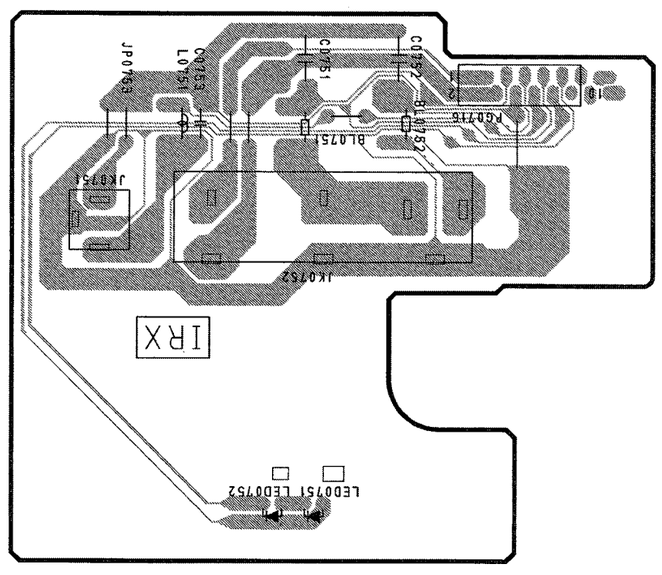
DIG. FSW. IRX CIRCUIT BOARDS -For F450E (UKN) -



DIG[FL DISPLAY]
[For F450E(UKN)]
[PATTERN No.JK1048-3]

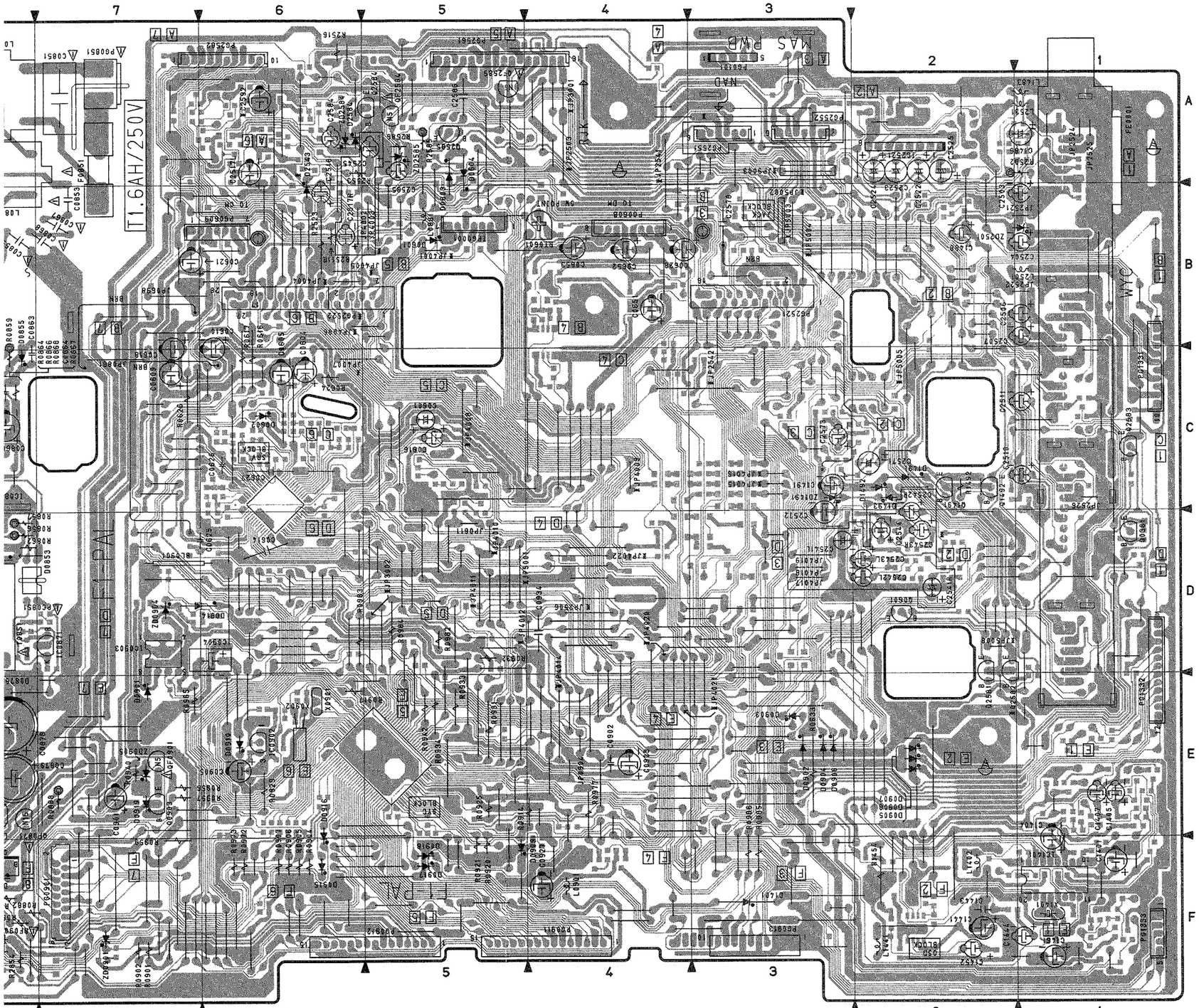


FSW[FRONT SW]
[For F450E(UKN)]
[PATTERN No.JK1048-3]



IRX[FRONT JACK]
[For F450E(UKN)]
[PATTERN No.JK1048-3]

RD



MAS[MAIN]-SIDE A-
[PATTERN No.JA1072-6]

IDENTIFICATION OF PARTS LOCATION

MAS [MAIN]

Symbol No.	Parts Location
BL	
BL851	A-8B
BL861	A-8C
BL862	A-8C
BL863	A-9C
BL864	A-8D
BL865	A-8D
BL866	A-8D
BL901	A-7D
C	
C381	B-1D
C383	B-1C
C601	A-5C
C602	B-6C
C603	B-6C
C604	A-6C
C605	A-6C
C606	B-6C
C607	B-6C
C608	B-6B
C609	A-7C
C610	A-6C
C611	B-6C
C612	B-6D
C613	B-6D
C614	A-6D
C615	B-6C
C616	A-5C
C617	B-6C
C618	A-7C
C619	B-6D
C620	B-6D
C621	A-7B
C625	A-6D
C626	A-6C
C627	A-6C
C628	A-4B
C651	A-4B
C652	A-4B
C653	A-4B
C654	B-4B
C655	B-4B
C656	B-4B
C657	B-4B
C851	A-7A
C852	A-8B
C853	A-7B
C854	A-8B
C855	A-8B
C856	A-8B
C857	A-8B
C858	A-9B
C859	A-8C
C860	A-8D
C861	A-8D
C863	A-8C
C864	A-8C
C865	A-8D
C866	A-8C
C867	A-7B
C868	A-7B
C869	A-8A
C871	A-8E
C872	A-8E
C873	A-8E
C874	A-9E
C875	A-9E
C876	A-8F
C877	A-8F
C878	A-8E
C879	A-8E
C880	B-8D
C881	A-8F
C883	A-8E
C884	A-8E
C885	A-8E
C887	A-9E
C901	A-7E
C902	A-4E
C903	A-4E
C904	A-6D
C905	A-6E
C906	B-7D
C908	B-6E
C909	B-6E
C912	B-6D
C914	B-8F
C915	B-8F
C916	B-8F
C917	A-8F
C918	A-8F
C919	B-6E
C920	B-6E
C922	B-7F
C923	B-7F
C926	B-6E
C927	A-4F
C928	B-4F
C930	B-6E
C931	B-5E
C932	B-5E
C933	B-5D
C934	A-4D
C1401	A-1F
C1402	B-1F
C1403	B-1F
C1404	A-1E
C1405	A-1E
C1407	A-1E
C1408	B-1F
C1409	B-1F
C1411	B-2F
C1412	B-2F
C1441	A-2F
C1442	B-2F
C1443	A-2F
C1444	A-1F
C1451	B-2F
C1452	A-2F
C1481	A-1F
C1484	B-1F
C1485	B-1A
C1486	A-1A
C1488	A-2B
C1491	A-3C
C1492	B-3C
C2502	B-1A
C2503	A-1B
C2504	A-1B
C2505	B-1B
C2506	A-1B
C2507	A-1B
C2510	A-1C
C2511	A-1C
C2512	B-3B
C2514	B-3B
C2515	B-4C
C2516	B-4B
C2517L	A-6A
C2517R	A-6B
C2518	A-6B
C2519	B-1B
C2520	B-3B
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C2522	A-2A
C2523	A-2A
C2524	A-2A
C2525	A-2A
C2526	B-1C
C2541L	A-3D
C2541R	A-2D
C2542L	A-2D
C2542R	A-2C
C2543L	A-2D
C2543R	A-2D
C2544	A-2D
C2545	A-5A
C2571	A-2C
C2572	A-3D
C2573	A-3C
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C2578	A-3B
C2584	A-6A
C2585	A-5A
C2586	A-5A
C2592	A-6A
C2593	B-6A
C2851	A-8F
C2852	A-8F
D	
D601	A-5B
D602	A-6C
D603	A-5A
D604	A-5A
D851	A-8B
D852	A-8D
D853	A-8D
D855	A-8C
D871	A-8E
D872	A-8E
D873	A-8E
D874	A-8D
D875	A-8E
D877	A-8F
D901	A-7E
D902	A-3E
D903	A-3E
D904	A-3E
D905	A-2E
D906	A-3E
D907	A-2E
D908	A-2E
D909	A-5F
D910	A-6E
D914	A-7D
D915	A-6F
D916	A-6E
D917	A-5F
D918	A-5F
D919	A-7E
D1401	A-3F
D1411	B-1E
D1491	A-2C
D1492	A-2C
D1493	A-2C
D2502	B-6A
D2503	B-3C
D2504	B-6A
D2541L	B-2D
D2541R	B-2D
D2542	B-2D
D2543	A-6B
D2584	A-6A
D2585	B-5A
D2591	B-3B
F	
F851	A-7A
FE	
FE1	A-1A
IC	
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IC651	B-4B
IC851	A-8C
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IC901	B-5E
IC902	A-6E
IC903	A-7D
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JP4009	A-4C
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JP4011	A-5D
JP4012	A-5D
JP4014	A-4E
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JP4016	A-3C
JP4017	A-3D
JP4018	A-3D
JP4019	A-3D
JP4020	A-4E
JP4021	A-4E
JP4022	A-4D
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JP4032	B-3C
JP4061	B-3C
JP4062	B-3C
JP4063	B-4C
JP4064	B-4C
JP4065	B-4C
JP4066	B-4C
JP4067	B-3C
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JP5003	A-3B
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JP5005	A-2C
JP5008	A-2D
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L852	A-8A
L871	A-8E
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L901	A-4F
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L1441	A-2F
L1483	A-1A
L2501	A-1B
L2531	A-1A
PC	
PC851	A-8D
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PG608	A-4B
PG609	A-6B
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PG911	A-4F
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PG913	A-3F
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Q601	A-2D
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Q875	B-8F
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Q1492	A-2C
Q2501	B-7A
Q2502	B-6A
Q2503	B-2B
Q2541L	B-2D
Q2541R	B-2D
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Q2543	B-6B
Q2544	B-6A
Q2545	B-6A
Q2571	B-2C
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Q2574	B-3C
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Q2584	A-5A
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Q2591	B-6A
Q2592	B-6A
Q2851	B-8F
Q2852	B-8F
QF	
QF851	A-8C
QF871	A-8E
QF872	A-9E
QF873	A-8E
QF901	A-7E
QF2584	A-5A
QF2589	A-5A
R	
R381	B-1D
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R602	B-6C
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R607	B-6C
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R625	B-6C
R626	A-7C
R628	B-6C
R629	B-6C
R630	B-6C
R631	B-6C
R632	B-2D
R633	A-3E
R651	B-4B
R652	B-4C
R653	B-4B
R654	B-4B
R655	B-4B
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R657	B-4C
R658	B-4C
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R856	A-8D
R857	A-8D
R858	A-8C
R859	A-8C
R862	A-8D
R863	A-9D
R864	A-8C
R865	A-8C
R866	A-8C
R867	A-8C
R868	A-8C
R881	A-8F
R882	A-8F
R888	A-7E
R889	B-7D
R890	B-7D
R891	B-7D
R892	B-8D
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R913	B-5E
R914	A-4E
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R920	A-5F
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R934	A-5E
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R936	B-5D
R937	B-5D
R938	B-7D
R939	B-5E
R940	A-7E
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R943	B-6E
R944	B-6D
R945	B-6E
R946	B-6E
R947	B-6D
R948	B-7D
R949	B-7D
R950	B-7E
R951	B-7E
R952	B-6E
R953	B-6E
R954	B-6E
R955	B-6E
R956	A-7E
R957	A-7E
R958	B-7F
R959	A-7F
R960	B-6F
R961	B-6F
R965	A-7E
R972	A-6F
R973	A-6F
R974	B-5F
R975	B-4F
R976	B-4F
R977	A-4E
R978	B-4F
R982	A-5D
R983	A-6D
R984	A-5D
R985	A-3F
R986	A-3F
R987	B-5E
R988	B-4E
R989	B-4E
R1402	B-1E
R1403	B-1F
R1404	B-1F
R1413	B-1E
R1414	B-1E
R1415	B-1E
R1416	B-1E
R1417	B-1E
R1441	B-2F
R1442	B-2F
R1443	B-2F
R1444	B-2F
R1451	B-2F
R1452	B-2F
R1454	A-2F
R1455	B-2F
R1456	B-2F
R1485	B-1F
R1486	B-2B
R1487	B-2B
R1489	B-1A
R1491	B-2C
R1492	A-2C
R2501	B-1A
R2502	A-1A
R2503	B-1C
R2504	B-1D
R2505	B-1C
R2506	B-2C
R2508	B-6A
R2509	B-4C
R2510L	B-6A
R2510R	B-5B
R2511L	B-6A
R2511R	A-6B
R2512L	B-7A
R2512R	B-7A
R2513	B-6A
R2514	B-7A
R2515	B-6A
R2516	A-6A
R2517	B-2B
R2518	B-2B
R2519	B-6A
R2520	B-3C
R2521	B-2A
R2522	B-2A
R2523	A-6B
R2524	B-2B
R2541L	B-2D
R2541R	B-2D
R2542L	B-2D
R2542R	B-2D
R2543L	B-2D
R2543R	B-2D
R2544L	B-2D
R2544R	B-2D
R2545L	B-2D
R2545R	B-2D
R2546L	B-2D
R2546R	B-2D
R2547	B-2D
R2548L	B-2D
R2548R	B-2D
R2549L	B-6A
R2549R	B-6A
R2550	B-6B
R2551	B-6B
R2552	B-6A
R2553	A-6A
R2571	B-3C
R2572	B-2C
R2573	B-3C
R2574	B-2C
R2575	B-3C
R2576	B-2C
R2577	B-3C
R2578	B-3C
R2579	B-3C
R2581	B-1D
R2582	B-1E
R2583	B-1C
R2584	B-6A
R2585	A-5A
R2586	A-5A
R2591	B-3B
R2592	B-6A
R2593	B-6A
R2594	B-6A
R2595	B-6A
R2596	B-6A
R2851	A-8F
R2852	B-8F
R2853	B-8F
R2854	A-8F
R2855	B-8F
RF	
RF871	A-9E
RF901	A-8F
RT	
RT601	A-4B
T	
T851	A-8D
TPG	
TPG1	A-5B
X	
X901	A-6E
X902	A-6E
X1401	A-1F
ZD	
ZD871	A-8F
ZD901	A-7F
ZD903	A-8F
ZD904	A-7D
ZD905	A-7E
ZD1491	A-3C
ZD2501	A-1B
ZD2584	A-6A
ZD2585	A-5A

MAS[MAIN] – SIDE A – DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

SYMBOL No.	M430E	F450E
C2541L,R	×	○
C2542L,R	×	○
C2543L,R	×	○
C2544	×	○
C2545	×	○
C2517R	×	○
C2592	×	○
D2543	×	○
JP2503	○	×
JP2506	○	×
JP2541	×	○
JP2542	×	○
JP3001	○	×
JP3002	○	×
JP3003	○	×
JP4001	×	○
JP4002	×	○
JP4003	×	○
JP4004	×	○
JP4005	×	○
JP4006	×	○
JP4007	×	○
JP4008	×	○
JP4009	×	○
JP4010	×	○
JP4011	×	○
JP4012	×	○
JP4014	×	○
JP4015	×	○
JP4016	×	○
JP4017	×	○
JP4018	×	○
JP4019	×	○
JP4020	×	○
JP4021	×	○
JP4022	×	○
JP5001	×	○
JP5002	×	○
JP5003	×	○
JP5004	×	○
JP5005	×	○
JP5008	×	○
PG2522	18 pin	28 pin
PG2551	×	○
PG2552	×	○
Q2582	×	○
R2553	×	○

MAS[MAIN] – SIDE B – DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

SYMBOL No.	M430E	F450E
D2541L,R	×	○
D2542	×	○
D2591	×	○
JP2501	○	×
JP2502	○	×
JP2504	○	×
JP2505	○	×
JP2511	○	×
JP2512	○	×
JP2543	×	○
JP4031	×	○
JP4032	×	○
JP4061	×	○
JP4062	×	○
JP4063	×	○
JP4064	×	○
JP4065	×	○
JP4066	×	○
JP4067	×	○
JP4068	×	○
JP4069	×	○
Q2541L,R	×	○
Q2542	×	○
Q2543	×	○
Q2544	×	○
Q2545	×	○
Q2574	×	○
Q2591	×	○
Q2592	×	○
R944	○	×
R2512L,R	○	JUMPER
R2541L,R	×	○
R2542L,R	×	○
R2543L,R	×	○
R2544L,R	×	○
R2545L,R	×	○
R2546L,R	×	○
R2547	×	○
R2548L,R	×	○
R2549L,R	×	○
R2550	×	○
R2551	×	○
R2552	×	○
R2582	×	○
R2591	×	○
R2592	×	○
R2593	×	○
R2594	×	○
R2595	×	○
R2596	×	○

IDENTIFICATION OF PARTS LOCATION

MAS [MAIN]

Symbol No.	Parts Location
BL	
BL851	A-8B
BL861	A-8C
BL862	A-8C
BL863	A-9C
BL864	A-8D
BL865	A-8D
BL866	A-8D
BL901	A-7D
C	
C381	B-1D
C383	B-1C
C601	A-5C
C602	B-6C
C603	B-6C
C604	A-6C
C605	A-6C
C606	B-6C
C607	B-6C
C608	B-6B
C609	A-7C
C610	A-6C
C611	B-6C
C612	B-6D
C613	B-6D
C614	A-6D
C615	B-6C
C616	A-5C
C617	B-6C
C618	A-7C
C619	B-6D
C620	B-6D
C621	A-7B
C625	A-6D
C626	A-6C
C627	A-6C
C628	A-4B
C651	A-4B
C652	A-4B
C653	A-4B
C654	B-4B
C655	B-4B
C656	B-4B
C657	B-4B
C851	A-7A
C852	A-8B
C853	A-7B
C854	A-8B
C855	A-8B
C856	A-8B
C857	A-8B
C858	A-9B
C859	A-8C
C860	A-8D
C861	A-8D
C863	A-8C
C864	A-8C
C865	A-8D
C866	A-8C
C867	A-7B
C868	A-7B
C869	A-8A
C871	A-8E
C872	A-8E
C873	A-8E
C874	A-9E
C875	A-9E
C876	A-8F
C877	A-8F
C878	A-8E
C879	A-8E
C880	B-8D
C881	A-8F
C883	A-8E
C884	A-8E
C885	A-8E
C887	A-9E
C901	A-7E
C902	A-4E
C903	A-4E
C904	A-6D
C905	A-6E
C906	B-7D
C908	B-6E
C909	B-6E
C912	B-6D
C914	B-8F
C915	B-8F
C916	B-8F
C917	A-8F
C918	A-8F
C919	B-6E
C920	B-6E
C922	B-7F
C923	B-7F
C926	B-6E
C927	A-4F
C928	B-4F
C930	B-6E
C931	B-5E
C932	B-5E
C933	B-5D
C934	A-4D
C1401	A-1F
C1402	B-1F
C1403	B-1F
C1404	A-1E
C1405	A-1E
C1407	A-1E
C1408	B-1F
C1409	B-1F
C1411	B-2F
C1412	B-2F
C1441	A-2F
C1442	B-2F
C1443	A-2F
C1444	A-1F
C1451	B-2F
C1452	A-2F
C1481	A-1F
C1484	B-1F
C1485	B-1A
C1486	A-1A
C1488	A-2B
C1491	A-3C
C1492	B-3C
C2502	B-1A
C2503	A-1B
C2504	A-1B
C2505	B-1B
C2506	A-1B
C2507	A-1B
C2510	A-1C
C2511	A-1C
C2512	B-3B
C2514	B-3B
C2515	B-4C
C2516	B-4B
C2517L	A-6A
C2517R	A-6B
C2518	A-6B
C2519	B-1B
C2520	B-3B
C2521	B-2A
C2522	A-2A
C2523	A-2A
C2524	A-2A
C2525	A-2A
C2526	B-1C
C2541L	A-3D
C2541R	A-2D
C2542L	A-2D
C2542R	A-2C
C2543L	A-2D
C2543R	A-2D
C2544	A-2D
C2545	A-5A
C2571	A-2C
C2572	A-3D
C2573	A-3C
C2575	B-6A
C2576	B-3A
C2577	B-2B
C2578	A-3B
C2584	A-6A
C2585	A-5A
C2586	A-5A
C2592	A-6A
C2593	B-6A
C2851	A-8F
C2852	A-8F
D	
D601	A-5B
D602	A-6C
D603	A-5A
D604	A-5A
D851	A-8B
D852	A-8D
D853	A-8D
D855	A-8C
D871	A-8E
D872	A-8E
D873	A-8E
D874	A-8D
D875	A-8E
D877	A-8F
D901	A-7E
D902	A-3E
D903	A-3E
D904	A-3E
D905	A-2E
D906	A-3E
D907	A-2E
D908	A-2E
D909	A-5F
D910	A-6E
D914	A-7D
D915	A-6F
D916	A-6E
D917	A-5F
D918	A-5F
D919	A-7E
D1401	A-3F
D1411	B-1E
D1491	A-2C
D1492	A-2C
D1493	A-2C
D2502	B-6A
D2503	B-3C
D2504	B-6A
D2541L	B-2D
D2541R	B-2D
D2542	B-2D
D2543	A-6B
D2584	A-6A
D2585	B-5A
D2591	B-3B
F	
F851	A-7A
FE	
FE1	A-1A
IC	
IC601	B-6C
IC651	B-4B
IC851	A-8C
IC871	A-7D
IC901	B-5E
IC902	A-6E
IC903	A-7D
IC904	A-8F
IC1401	A-1F
IC1441	B-2F
IC2521	A-2A
JP	
JP2501	B-3B
JP2502	B-3B
JP2503	A-4A
JP2504	B-6B
JP2505	B-6B
JP2506	A-4D
JP2511	B-5B
JP2512	B-4B
JP2541	A-4A
JP2542	A-3B
JP2543	B-3B
JP3001	A-4A
JP3002	A-5D
JP3003	A-3A
JP4001	A-5B
JP4002	A-6B
JP4003	A-5B
JP4004	A-6B
JP4005	A-6B
JP4006	A-5B
JP4007	A-6C
JP4008	A-5C
JP4009	A-4C
JP4010	A-5D
JP4011	A-5D
JP4012	A-5D
JP4014	A-4E
JP4015	A-3C
JP4016	A-3C
JP4017	A-3D
JP4018	A-3D
JP4019	A-3D
JP4020	A-4E
JP4021	A-4E
JP4022	A-4D
JP4031	B-3C
JP4032	B-3C
JP4061	B-3C
JP4062	B-3C
JP4063	B-4C
JP4064	B-4C
JP4065	B-4C
JP4066	B-4C
JP4067	B-3C
JP4068	B-3C
JP4069	B-6B
JP5001	A-5D
JP5002	A-3B
JP5003	A-3B
JP5004	A-3B
JP5005	A-2C
JP5008	A-2D
L	
L851	A-8A
L852	A-8A
L871	A-8E
L872	A-8E
L881	A-5B
L901	A-4F
L1402	A-2F
L1441	A-2F
L1483	A-1A
L2501	A-1B
L2531	A-1A
PC	
PC851	A-8D
PG	
PG101	A-3A
PG608	A-4B
PG609	A-6B
PG851	A-7A
PG901	A-7F
PG911	A-4F
PG912	A-5F
PG913	A-3F
PG1331	A-1C
PG1332	A-1E
PG1333	A-1F
PG2521	A-3B
PG2522	A-6B
PG2551	A-3A
PG2552	A-3A
PG2561	A-5A
PG2562	A-6A
Q	
Q381	A-1D
Q383	B-1C
Q384	B-1C
Q601	A-2D
Q871	A-8F
Q874	A-8F
Q875	B-8F
Q901	B-4F
Q902	B-7D
Q903	A-7E
Q904	B-4F
Q905	B-4F
Q1401	B-1E
Q1404	B-1E
Q1405	B-1E
Q1451	B-2F
Q1482	B-1F
Q1491	A-2C
Q1492	A-2C
Q2501	B-7A
Q2502	B-6A
Q2503	B-2B
Q2541L	B-2D
Q2541R	B-2D
Q2542	B-6A
Q2543	B-6B
Q2544	B-6A
Q2545	B-6A
Q2571	B-2C
Q2572	B-3C
Q2573	B-2C
Q2574	B-3C
Q2581	A-2D
Q2582	A-2D
Q2583	A-1C
Q2584	A-5A
Q2585	A-5A
Q2591	B-6A
Q2592	B-6A
Q2851	B-8F
Q2852	B-8F
QF	
QF851	A-8C
QF871	A-8E
QF872	A-9E
QF873	A-8E
QF901	A-7E
QF2584	A-5A
QF2589	A-5A
R	
R381	B-1D
R601	B-6C
R602	B-6C
R603	B-6C
R604	B-6C
R605	B-6C
R606	B-6C
R607	B-6C
R608	B-6C
R609	B-6C
R610	B-6C
R611	B-6C
R612	B-6C
R613	B-6C
R614	B-6C
R615	B-6C
R616	A-6C
R617	A-6C
R618	B-6C
R619	B-6C
R620	B-6C
R621	B-6C
R622	B-6D
R623	B-4B
R624	A-6C
R625	B-6C
R626	A-7C
R628	B-6C
R629	B-6C
R630	B-6C
R631	B-6C
R632	B-2D
R633	A-3E
R651	B-4B
R652	B-4C
R653	B-4B
R654	B-4B
R655	B-4B
R656	B-4B
R657	B-4C
R658	B-4C
R852	A-8B
R854	A-9D
R855	A-8C
R856	A-8D
R857	A-8D
R858	A-8C
R859	A-8C
R862	A-8D
R863	A-9D
R864	A-8C
R865	A-8C
R866	A-8C
R867	A-8C
R868	A-8C
R881	A-8F
R882	A-8F
R888	A-7E
R889	B-7D
R890	B-7D
R891	B-7D
R892	B-8D
R893	A-8F
R894	A-8F
R895	B-8D
R896	B-7D
R901	A-7F
R902	A-7F
R903	B-7F
R904	A-6F
R905	A-6F
R906	A-6F
R907	A-6F
R908	B-6E
R909	B-6E
R910	B-6E
R911	B-6E
R912	B-5E
R913	B-5E
R914	A-4E
R915	B-5E
R917	A-6E
R918	B-5F
R919	B-5F
R920	A-5F
R921	A-5F
R922	B-5F
R923	B-5E
R924	B-5D
R925	A-5E
R926	B-6E
R927	B-6E
R928	B-6E
R929	A-6E
R930	B-6E
R931	A-5E
R932	A-5D
R933	A-5E
R934	A-5E
R935	B-5E
R936	B-5D
R937	B-5D
R938	B-7D
R939	B-5E
R940	A-7E
R941	B-6D
R942	A-5E
R943	B-6E
R944	B-4D
R945	B-6E
R946	B-6E
R947	B-6D
R948	B-7D
R949	B-7D
R950	B-7E
R951	B-7E
R952	B-6E
R953	B-6E
R954	B-6E
R955	B-6E
R956	A-7E
R957	A-7E
R958	B-7F
R959	A-7F
R960	B-6F
R961	B-6F
R965	A-7E
R972	A-6F
R973	A-6F
R974	B-5F
R975	B-4F
R976	B-4F
R977	A-4E
R978	B-4F
R982	A-5D
R983	A-6D
R984	A-5D
R985	A-3F
R986	A-3F
R987	B-5E
R988	B-4E
R989	B-4E
R1402	B-1E
R1403	B-1F
R1404	B-1F
R1413	B-1E
R1414	B-1E
R1415	B-1E
R1416	B-1E
R1417	B-1E
R1441	B-2F
R1442	B-2F
R1443	B-2F
R1444	B-2F
R1451	B-2F
R1452	B-2F
R1454	A-2F
R1455	B-2F
R1456	B-2F
R1485	B-1F
R1486	B-2B
R1487	B-2B
R1489	B-1A
R1491	B-2C
R1492	A-2C
R2501	B-1A
R2502	A-1A
R2503	B-1C
R2504	B-1C
R2505	B-1C
R2506	B-2C
R2508	B-6A
R2509	B-4C
R2510L	B-6A
R2510R	B-5B
R2511L	B-6A
R2511R	A-6B
R2512L	B-7A
R2512R	B-7A
R2513	B-6A
R2514	B-7A
R2515	B-6A
R2516	A-6A
R2517	B-2B
R2518	B-2B
R2519	B-6A
R2520	B-3C
R2521	B-2A
R2522	B-2A
R2523	A-6B
R2524	B-2B
R2541L	B-2D
R2541R	B-2D
R2542L	B-2D
R2542R	B-2D
R2543L	B-2D
R2543R	B-2D
R2544L	B-2D
R2544R	B-2D
R2545L	B-2D
R2545R	B-2D
R2546L	B-2D
R2546R	B-2D
R2547	B-2D
R2548L	B-2D
R2548R	B-2D
R2549L	B-6A
R2549R	B-6A
R2550	B-6B
R2551	B-6B
R2552	B-6A
R2553	A-6A
R2571	B-3C
R2572	B-2C
R2573	B-3C
R2574	B-2C
R2575	B-3C
R2576	B-2C
R2577	B-3C
R2578	B-3C
R2579	B-3C
R2581	B-1D
R2582	B-1E
R2583	B-1C
R2584	B-6A
R2585	A-5A
R2586	A-5A
R2591	B-3B
R2592	B-6A
R2593	B-6A
R2594	B-6A
R2595	B-6A
R2596	B-6A
R2851	A-8F
R2852	B-8F
R2853	B-8F
R2854	A-8F
R2855	B-8F
RF	
RF871	A-9E
RF901	A-8F
RT	
RT601	A-4B
T	
T851	A-8D
TPG	
TPG1	A-5B
X	
X901	A-6E
X902	A-6E
X1401	A-1F
ZD	
ZD871	A-8F
ZD901	A-7F
ZD903	A-8F
ZD904	A-7D
ZD905	A-7E
ZD1491	A-3C
ZD2501	A-1B
ZD2584	A-6A
ZD2585	A-5A

MAS[MAIN] – SIDE A – DIFFERENCE TABLE

NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

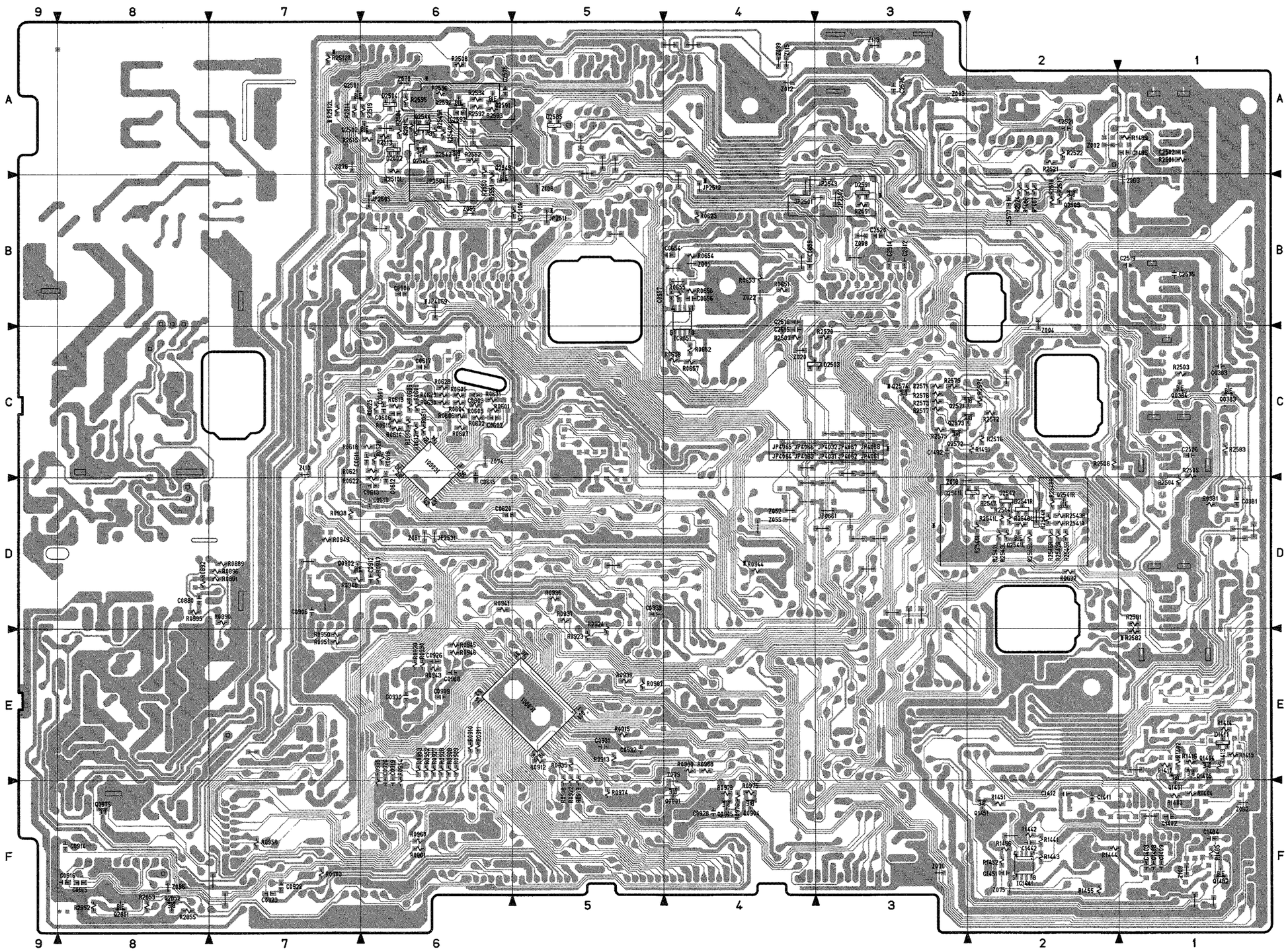
SYMBOL No.	M430E	F450E
C2541L,R	×	○
C2542L,R	×	○
C2543L,R	×	○
C2544	×	○
C2545	×	○
C2517R	×	○
C2592	×	○
D2543	×	○
JP2503	○	×
JP2506	○	×
JP2541	×	○
JP2542	×	○
JP3001	○	×
JP3002	○	×
JP3003	○	×
JP4001	×	○
JP4002	×	○
JP4003	×	○
JP4004	×	○
JP4005	×	○
JP4006	×	○
JP4007	×	○
JP4008	×	○
JP4009	×	○
JP4010	×	○
JP4011	×	○
JP4012	×	○
JP4014	×	○
JP4015	×	○
JP4016	×	○
JP4017	×	○
JP4018	×	○
JP4019	×	○
JP4020	×	○
JP4021	×	○
JP4022	×	○
JP5001	×	○
JP5002	×	○
JP5003	×	○
JP5004	×	○
JP5005	×	○
JP5008	×	○
PG2522	18 pin	28 pin
PG2551	×	○
PG2552	×	○
Q2582	×	○
R2553	×	○

MAS[MAIN] – SIDE B – DIFFERENCE TABLE

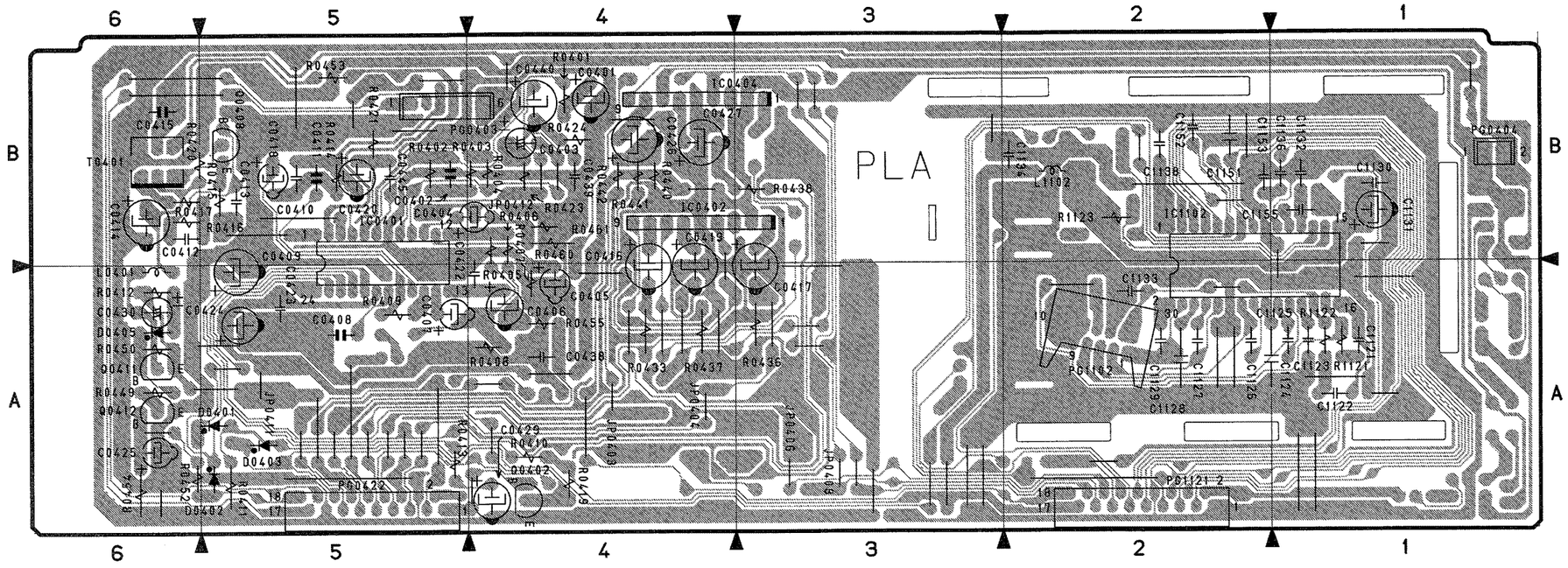
NOTE: This table listes the different components marked with asterisks(＊) in the circuit board diagrams.

SYMBOL No.	M430E	F450E
D2541L,R	×	○
D2542	×	○
D2591	×	○
JP2501	○	×
JP2502	○	×
JP2504	○	×
JP2505	○	×
JP2511	○	×
JP2512	○	×
JP2543	×	○
JP4031	×	○
JP4032	×	○
JP4061	×	○
JP4062	×	○
JP4063	×	○
JP4064	×	○
JP4065	×	○
JP4066	×	○
JP4067	×	○
JP4068	×	○
JP4069	×	○
Q2541L,R	×	○
Q2542	×	○
Q2543	×	○
Q2544	×	○
Q2545	×	○
Q2574	×	○
Q2591	×	○
Q2592	×	○
R944	○	×
R2512L,R	○	JUMPER
R2541L,R	×	○
R2542L,R	×	○
R2543L,R	×	○
R2544L,R	×	○
R2545L,R	×	○
R2546L,R	×	○
R2547	×	○
R2548L,R	×	○
R2549L,R	×	○
R2550	×	○
R2551	×	○
R2552	×	○
R2582	×	○
R2591	×	○
R2592	×	○
R2593	×	○
R2594	×	○
R2595	×	○
R2596	×	○

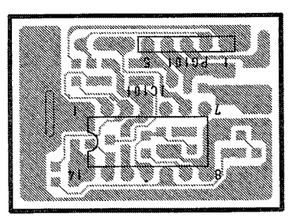
MAS [SIDE·B] CIRCUIT BOARD



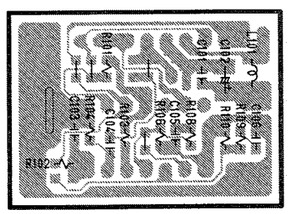
MAS[MAIN]-SIDE B-
[PATTERN No.JA1072-6]



PLA[PRE AMP/AUDIO]
[PATTERN No.JK1026-7]
[For VT-M430E]



PDC-SIDE A-



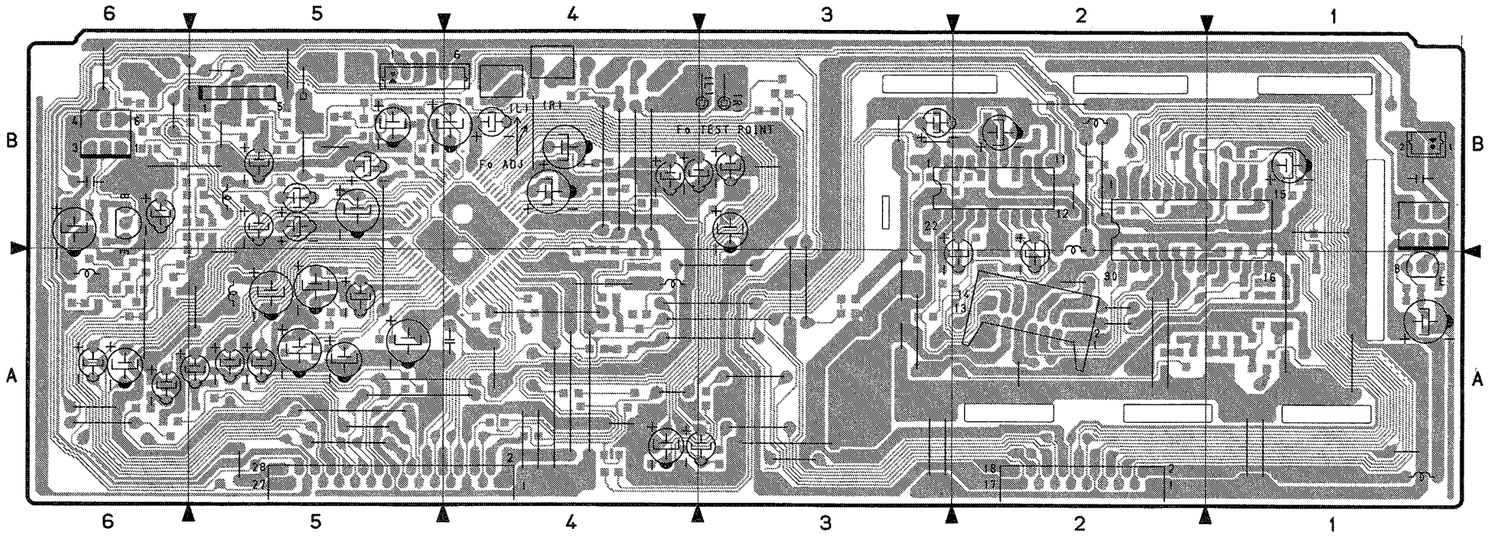
PDC-SIDE B-
[PATTERN No.JK1087-2]

IDENTIFICATION OF PARTS LOCATION

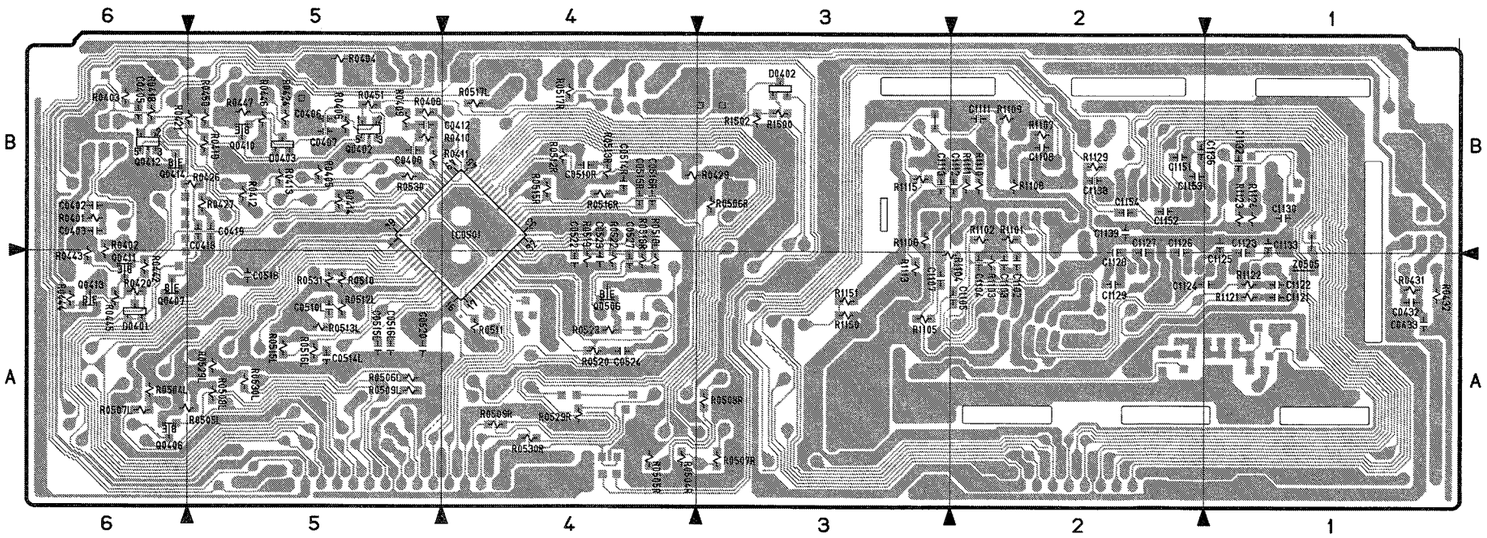
PLA [PRE AMP/AUDIO]

Symbol No.	Parts Location
C	
C401	4B
C402	5B
C403	4B
C404	4B
C405	4A
C406	4A
C407	5A
C408	5A
C409	5A
C410	5B
C411	5B
C412	6B
C413	5B
C414	6B
C415	6B
C416	4B
C417	3A
C418	5B
C419	4B
C420	5B
C422	4A
C423	5A
C424	5A
C425	6A
C426	4B
C427	4B
C429	4A
C430	6A
C438	4A
C439	4B
C440	4B
C445	5B
C1121	1A
C1122	1A
C1123	1A
C1124	1A
C1125	1A
C1126	2A
C1127	2A
C1128	2A
C1129	2A
C1130	1B
C1131	1B
C1132	1B
C1133	2A
C1134	2B
C1136	1B
C1138	2B
C1151	2B
C1152	2B
C1153	2B
C1155	1B
D	
D401	5A
D402	5A
D403	5A
D405	6A
IC	
IC401	5B
IC402	4B
IC404	4B
IC1102	2B
L	
L401	6A
L403	1A
L1102	2B
PG	
PG403	5B
PG404	1B
PG422	5A
PG1102	2A
PG1121	2A
Q	
Q402	4A
Q408	5B
Q411	6A
Q412	6A
R	
R401	4B
R402	5B
R403	4B
R404	4B
R405	4B
R406	4B
R407	4A
R408	4A
R409	5A
R410	4A
R411	5A
R412	6A
R413	5A
R414	5B
R415	5B
R416	6B
R417	6B
R419	4A
R420	6B
R421	5B
R423	4B
R424	4B
R433	4A
R436	3A
R437	4A
R438	3B
R440	4B
R441	4B
R442	4B
R449	6A
R450	6A
R452	6A
R453	5B
R454	6A
R455	4A
R460	4B
R461	4B
R1121	1A
R1122	1A
R1123	2B
T	
T401	6B

PHA CIRCUIT BOARD



PHA[PRE AMP/AUDIO]-SIDE A-
[For VT-F450E]



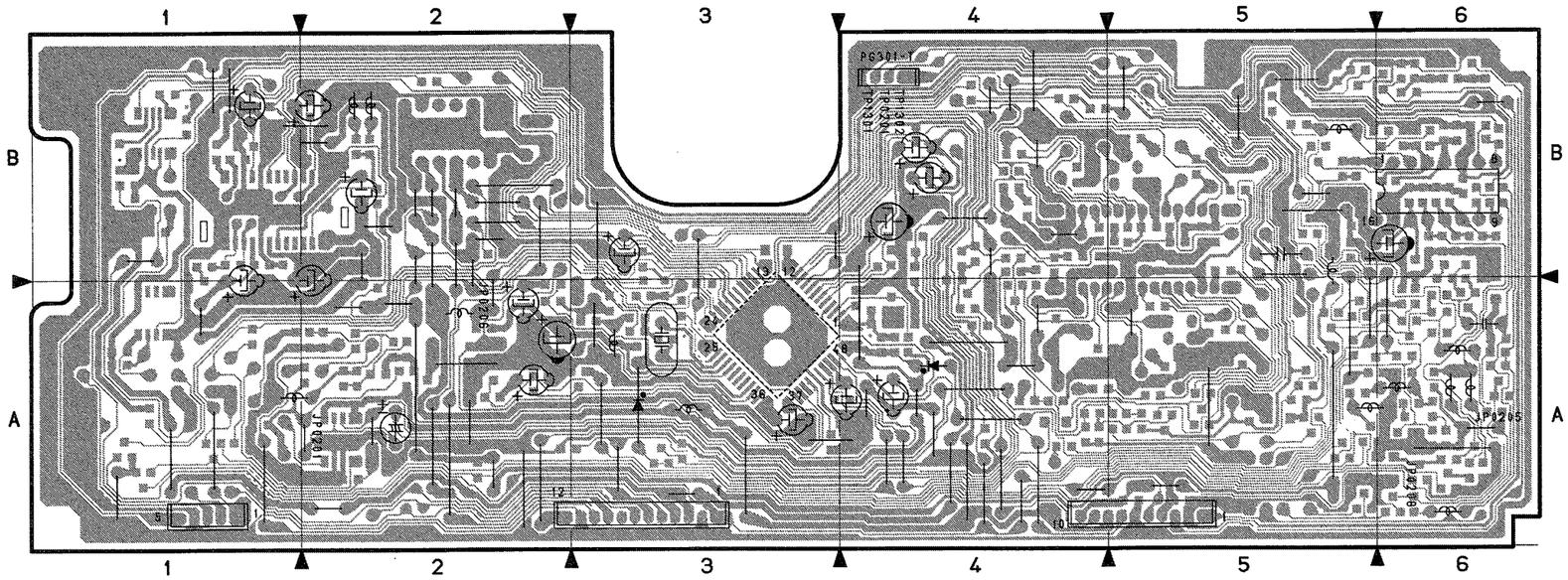
PHA[PRE AMP/AUDIO]-SIDE B-
[PATTERN No.JA1015-9]
[For VT-F450E]

IDENTIFICATION OF PARTS LOCATION

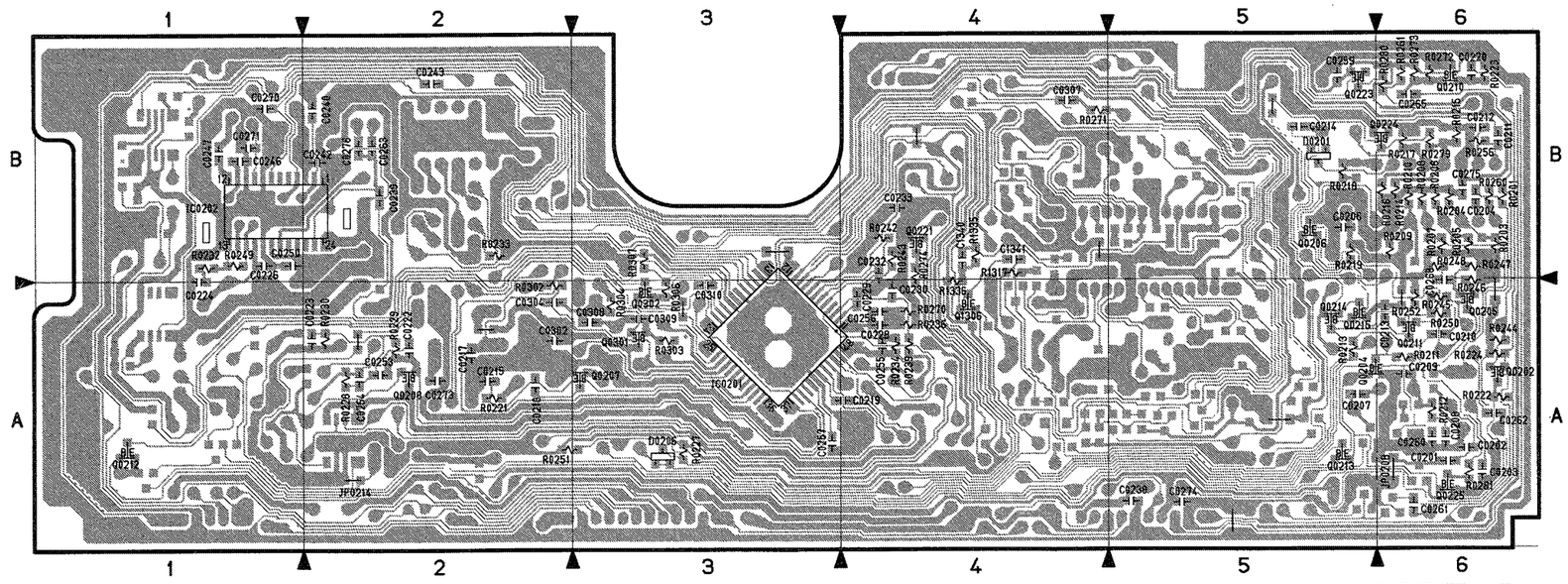
PHA [PRE AMP/AUDIO]

Symbol No.	Parts Location
C	
C401	A-6B
C402	B-6B
C403	B-6B
C404	A-6B
C405	B-6B
C406	B-5B
C407	B-5B
C408	B-5B
C409	A-4B
C410	A-4B
C411	A-3B
C412	B-5B
C413	A-5B
C414	A-5B
C415	A-5B
C416	A-5B
C417	A-5B
C418	B-5B
C419	B-5B
C431	A-1A
C432	B-1A
C433	B-1A
C434	A-1B
C440	A-6B
C441	A-5B
C505	A-5B
C506L	A-6A
C506R	A-3A
C507L	A-5A
C507R	A-4A
C508L	A-5A
C508R	A-3B
C509L	A-5A
C509R	A-3B
C510L	B-5A
C510R	B-4B
C511L	A-5A
C511R	A-4B
C512L	A-5A
C512R	A-4B
C513L	A-5A
C513R	A-4B
C514L	B-5A
C514R	B-4B
C515L	B-5A
C515R	B-4B
C516L	B-5A
C516R	B-4B
C517	A-5A
C518	B-5A
C519	A-5A
C520	B-5A
C521	A-5A
C522	B-4A
C523	B-4A
C524	B-4A
C526	A-4A
C527	B-4A
C530L	A-6A
C530R	A-6A
C1101	A-2A
C1102	B-2A
C1103	B-2A
C1104	B-2A
C1105	B-2A
C1106	A-2A
C1107	B-3A
C1108	B-2B
C1110	A-2B
C1111	B-2B
C1112	B-2B
C1113	B-3B
C1114	A-3B
C1121	B-1A
C1122	B-1A
C1123	B-1B
C1124	B-1A
C1125	B-1B
C1126	B-2A
C1127	B-2A
C1128	B-2A
C1129	B-2A
C1130	B-1B
C1131	A-1B
C1132	B-1B
C1133	B-1B
C1136	B-2B
C1138	B-2B
C1139	B-2B
C1151	B-2B
C1152	B-2B
C1153	B-2B
C1154	B-2B
D	
D401	B-6A
D402	B-3B
D403	B-5B
IC	
IC401	A-5B
IC501	B-4B
IC1101	A-2B
IC1102	A-2B
L	
L401	A-6A
L402	A-5B
L403	A-1A
L501	A-5A
L502	A-4A
L1101	A-2A
L1102	A-2B
PG	
PG403	A-5B
PG404	A-1B
PG422	A-5A
PG1102	A-2A
PG1121	A-2A
Q	
Q401	A-6B
Q402	B-5B
Q406	B-6A
Q407	B-6A
Q409	A-1A
Q410	B-5B
Q411	B-6A
Q412	B-6B
Q413	B-6A
Q414	B-6B
Q506	B-4A
R	
R401	B-6B
R402	B-6A
R403	B-6B
R404	B-5B
R405	B-5B
R406	B-5B
R408	B-5B
R409	B-5B
R410	B-5B
R411	B-5B
R412	B-5B
R413	B-5B
R414	B-5B
R418	B-6B
R419	B-5B
R420	B-6A
R421	B-5B
R424	B-5B
R426	B-5B
R427	B-5B
R429	B-4B
R431	B-1A
R432	B-1A
R442	B-6A
R443	B-6A
R444	B-6A
R445	B-6A
R446	B-5B
R447	B-5B
R450	B-5B
R451	B-5B
R504L	B-6A
R504R	B-4A
R505L	B-5A
R505R	B-4A
R506L	B-5A
R506R	B-3B
R507L	B-6A
R507R	B-3A
R508L	B-5A
R508R	B-3A
R509L	B-5A
R509R	B-4A
R510	B-5A
R511	B-4A
R512L	B-5A
R512R	B-4B
R513L	B-5A
R513R	B-4B
R515L	B-5A
R515R	B-4B
R516L	B-5A
R516R	B-4B
R517L	B-4B
R517R	B-4B
R518L	B-4A
R518R	B-4A
R519	B-4A
R520	B-4A
R522	B-4A
R523	B-4A
R529L	B-5A
R529R	B-4A
R530	B-5B
R530L	B-5A
R530R	B-4A
R531	B-5A
R1101	B-2B
R1102	B-2B
R1103	B-2A
R1104	B-2A
R1105	B-3A
R1106	B-3B
R1107	B-2B
R1108	B-2B
R1109	B-2B
R1110	B-2B
R1111	B-2B
R1113	B-3A
R1115	B-3B
R1121	B-1A
R1122	B-1A
R1123	B-1B
R1124	B-1B
R1129	B-2B
R1150	B-3A
R1151	B-3A
R1500	B-3B
R1502	B-3B
RT	
RT501L	A-4B
RT501R	A-4B
T	
T401	A-6B
T402	A-1B
TP	
TP501	A-3B
TP502	A-3B

WYC. MWB CIRCUIT BOARDS

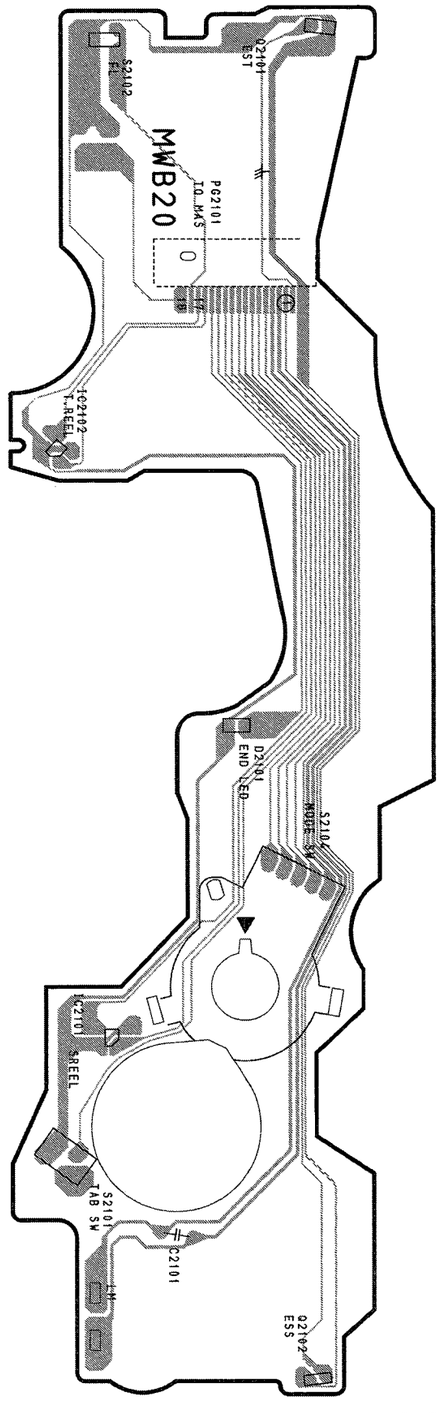


WYC[Y/CHROMA] -SIDE A-



WYC[Y/CHROMA] -SIDE B-

[PATTERN No.JA1066-6]



MWB[SENSOR]

[PATTERN No.152018-4]

IDENTIFICATION OF PARTS LOCATION

WYC [Y/CHROMA]

Symbol No.	Parts Location
C	
C201	B-6A
C202	B-6A
C203	B-6A
C204	B-6B
C205	A-6B
C206	B-5B
C207	B-5A
C208	B-6A
C209	B-6A
C210	B-6A
C211	B-6B
C212	B-6B
C213	B-6A
C214	B-5B
C215	B-2A
C216	A-2A
C217	B-2A
C218	B-2A
C219	B-4A
C220	B-6B
C221	A-4A
C222	B-2A
C223	B-2A
C224	B-1A
C225	A-1B
C226	B-1B
C227	A-2A
C228	B-4A
C229	B-4A
C230	B-4A
C231	A-4A
C232	B-4B
C233	B-4B
C234	A-4B
C235	A-4B
C236	A-4B
C237	A-3B
C238	B-5A
C239	B-2B
C240	B-2B
C241	A-2B
C242	B-2B
C243	B-2B
C245	A-5B
C246	B-1B
C247	B-1B
C248	A-2B
C249	A-2B
C250	B-1B
C253	B-2A
C254	B-2A
C255	B-4A
C256	B-4A
C257	B-3A
C259	B-5B
C260	B-6A
C261	B-6A
C262	B-6A
C263	B-2B
C265	B-6B
C266	A-6A
C267	A-5B
C268	B-6A
C270	B-1B
C271	B-1B
C273	B-2A
C274	B-5A
C275	B-6B
C276	B-2B
C301	A-3A
C302	B-2A
C303	A-2A
C304	B-2A
C305	A-2A
C307	B-4B
C308	B-3A
C309	B-3A
C310	B-3A
C1340	B-4B
C1341	B-4B
D	
D201	B-5B
D203	A-4A
D204	A-3A
D206	B-3A
IC	
IC201	B-3A
IC202	B-1B
IC203	A-6B
L	
L201	A-6A
L202	A-6A
L203	A-5A
L204	A-6A
L205	A-5B
L206	A-5B
L207	A-1A
L208	A-3A
L214	A-6A
L215	A-6A
L216	A-2B
L218	A-2B
L301	A-2A
L302	A-3A
PG	
PG231	A-5A
PG232	A-3A
PG233	A-1A
PG301-T	A-4B
Q	
Q202	B-6A
Q204	B-5A
Q205	B-6A
Q206	B-5B
Q207	B-3A
Q208	B-2A
Q210	B-6B
Q211	B-6A
Q212	B-1A
Q213	B-5A
Q214	B-5A
Q215	B-5A
Q221	B-4B
Q223	B-5B
Q224	B-6B
Q225	B-6A
Q301	B-3A
Q302	B-3A
Q1306	B-4A
R	
R201	B-6B
R203	B-6B
R204	B-6B
R205	B-6B
R206	B-6B
R207	B-6B
R208	B-6B
R209	B-6B
R210	B-6B
R211	B-6A
R212	B-6A
R213	B-5A
R214	B-6B
R215	B-6B
R216	B-6B
R217	B-6B
R218	B-5B
R219	B-5B
R221	B-2A
R222	B-6A
R223	B-6B
R224	B-6A
R227	B-3A
R228	B-2A
R229	B-2A
R230	B-2A
R232	B-1B
R233	B-2B
R234	B-4A
R236	B-4A
R239	B-4A
R242	B-4B
R243	B-4B
R244	B-6A
R245	B-6A
R246	B-6A
R247	B-6B
R248	B-6B
R249	B-1B
R250	B-6A
R251	B-2A
R252	B-6A
R256	B-6B
R260	B-6B
R261	B-6B
R270	B-4A
R271	B-4B
R272	B-6B
R273	B-6B
R274	B-4B
R279	B-6B
R280	B-6B
R281	B-6A
R283	B-2B
R302	B-2A
R303	B-3A
R304	B-3A
R306	B-3A
R307	B-3B
R1202	B-2A
R1317	B-4B
R1335	B-4B
R1336	B-4A
TP	
TP201	A-4B
TP1301	A-4B
TP1302	A-4B
X	
X301	A-3A

IDENTIFICATION OF PARTS LOCATION

NIC [NICAM] (For UKN)

Symbol No.	Parts Location
BL	
BL1801	A-2A
BL1802	A-2B
BL1803	A-3A
C	
C1801	A-3B
C1802	A-3B
C1803	A-3B
C1804	A-3B
C1805	A-3B
C1806	A-3B
C1807	A-3B
C1808	A-3B
C1810	A-3B
C1811	A-3A
C1812	A-3A
C1813	A-2B
C1814	A-3A
C1815	A-3A
C1816	A-3A
C1817	A-3A
C1818	A-3A
C1819	A-2A
C1820	A-2A
C1821	A-3A
C1822	A-2A
C1823	A-3A
C1824	A-2A
C1825	A-2B
C1826	A-2B
C1828	A-2B
C1829	A-2B
C1830	A-2A
C1833	A-2B
C1834	A-2B
C1835	A-3B
C1836	A-3B
C1837L	A-3A
C1837R	A-3A
C1838L	A-3A
C1838R	A-3A
C1839L	A-3A
C1839R	A-3A
C1841	A-2B
C1842	A-2A
C1881	A-3A
C1882	A-2A
D	
D1801	A-2A
D1802	A-2B
IC	
IC1801	B-3B
IC1802	B-3A
L	
L1801	A-2A
L1802	A-2B
L1803	A-2B

Symbol No.	Parts Location
L1805	A-3A
L1807	A-3A
L1808L	A-3A
L1808R	A-3A
PG	
PG1801	A-2A
PG1802	A-2A
R	
R1801	A-3B
R1802	A-3B
R1803	A-3B
R1804	A-3B
R1805	A-3B
R1807	A-3B
R1808	A-3A
R1809	A-3A
R1811	A-2A
R1812	A-2B
R1813	A-2B
R1815	A-2B
R1830L	A-3A
R1830R	A-3A
R1831L	A-3A
R1831R	A-3A
R1832L	A-3A
R1832R	A-3A
R1833L	A-3A
R1833R	A-3A
R1834L	A-3A
R1834R	A-3A
X	
X1801	A-3B

NIC [NICAM] (For NA)

Symbol No.	Parts Location
BL	
BL1801	A-2A
BL1802	A-2B
BL1803	A-3A
C	
C1801	A-3B
C1802	A-3B
C1803	A-3B
C1804	A-3B
C1805	A-3B
C1806	A-3B
C1807	A-3B
C1808	A-3B
C1810	A-3B
C1812	A-3A
C1813	A-2B
C1814	A-3A
C1815	A-3A
C1816	A-3A
C1817	A-3A
C1818	A-3A
C1819	A-2A
C1820	A-2A
C1821	A-3A
C1822	A-2A
C1823	A-3A
C1824	A-2A
C1825	A-2B
C1826	A-2B
C1828	A-2B
C1829	A-2B
C1830	A-2A
C1833	A-2B
C1834	A-2B
C1835	A-3B
C1836	A-3B
C1837L	A-3A
C1837R	A-3A
C1838L	A-3A
C1838R	A-3A
C1839L	A-3A
C1839R	A-3A
C1841	A-2B
C1842	A-2A
C1851	A-1B
C1852	A-1B
C1854	A-1A
C1856	A-1A
C1857	A-1B
C1858	A-1B
C1859	A-1B
C1860	A-1B
C1861	A-1B
C1862	A-1B
C1863	A-1B
C1864	A-1A
C1865	A-1A

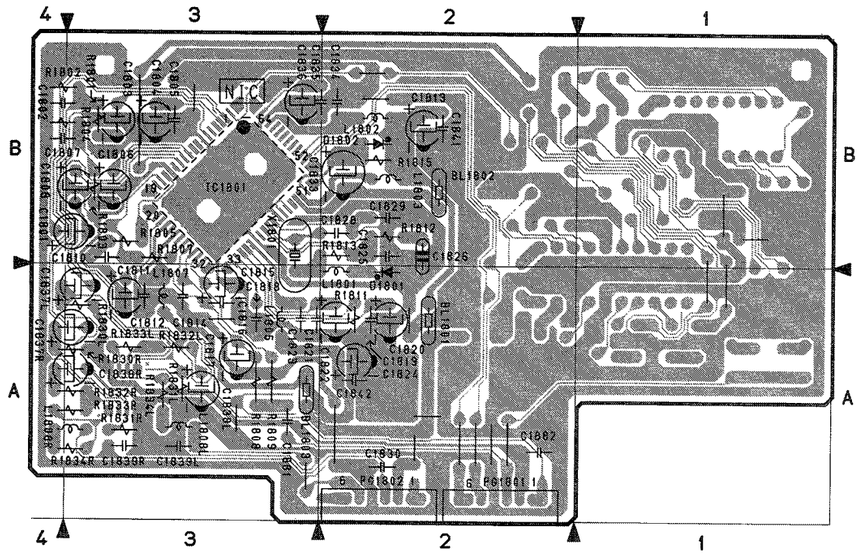
Symbol No.	Parts Location
C1866	A-2B
C1867	A-2B
C1881	A-3A
C1882	A-2A
C1890	A-2B
C1891	A-1A
C1895	A-2B
C1896	A-2B
C1897	A-1B
C1898	A-2B
C1899	A-2B
CF	
CF1851	A-1A
CF1852	A-1A
D	
D1801	A-2A
D1802	A-2B
IC	
IC1801	B-3B
IC1802	B-3A
IC1851	A-1A
IC1852	A-1B
L	
L1801	A-2A
L1802	A-2B
L1803	A-2B
L1804	A-2A
L1805	A-3A
L1806	A-2B
L1807	A-3A
L1808L	A-3A
L1808R	A-3A
PG	
PG1801	A-2A
PG1802	A-2A
R	
R1801	A-3B
R1802	A-3B
R1803	A-3B
R1804	A-3B
R1805	A-3B
R1807	A-3B
R1808	A-3A
R1809	A-3A
R1811	A-2A
R1812	A-2B
R1813	A-2B
R1815	A-2B
R1830L	A-3A
R1830R	A-3A
R1831L	A-3A
R1831R	A-3A
R1832L	A-3A
R1832R	A-3A
R1833L	A-3A
R1833R	A-3A
R1834L	A-3A

Symbol No.	Parts Location
R1834R	A-3A
R1851	A-1A
R1852	A-2B
R1853	A-2B
R1854	A-1A
R1855	A-1B
R1856	A-2B
R1857	A-2B
R1858	A-1B
R1860	A-1A
R1861	A-1A
R1862	A-1A
R1863	A-1A
R1864	A-2B
R1865	A-2A
R1870	A-2B
R1899	A-2B
X	
X1801	A-3B
X1851	A-2A

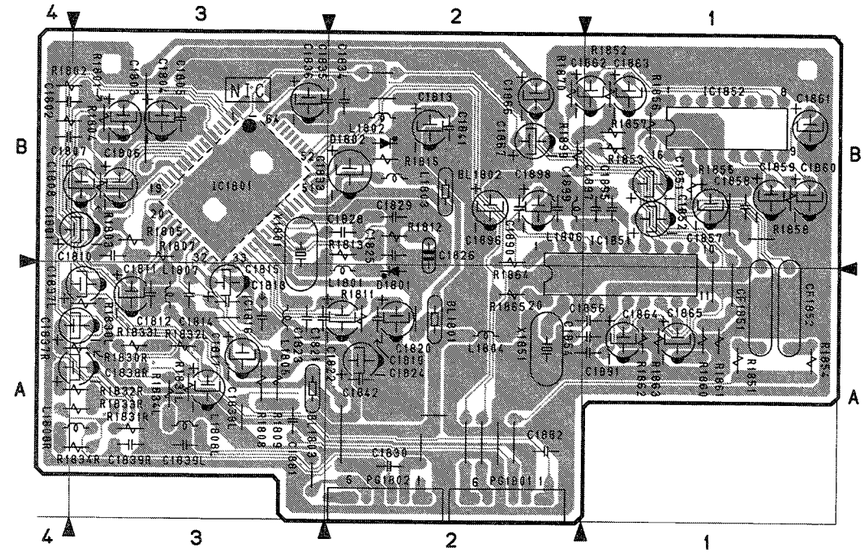
ATS [A2] (For VPS)

Symbol No.	Parts Location
C	
C1851	A-1A
C1852	A-1A
C1853	A-1A
C1854	A-1B
C1856	A-2A
C1857	A-1B
C1858	A-1B
C1859	A-1B
C1860	A-1B
C1861	A-1B
C1862	A-1A
C1863	A-1B
C1864	A-2A
C1865	A-2A
C1890	A-1B
C1891	A-1A
C1894	A-1A
C1895	A-1A
C1896	A-1A
C1897	A-1A
C1898	A-1B
C1899	A-1B
CF	
CF1851	A-1A
CF1852	A-1A
IC	
IC1851	A-1B
IC1852	A-1B
L	
L1806	A-1A
PG	
PG1851	A-1A
PG1852	A-1A
R	
R1851	A-1A
R1852	A-1A
R1853	A-1A
R1854	A-1A
R1855	A-1B
R1856	A-1B
R1857	A-2B
R1858	A-1B
R1864	A-1B
R1865	A-2B
R1870	A-1A
R1899	A-1A
X	
X1851	A-2B

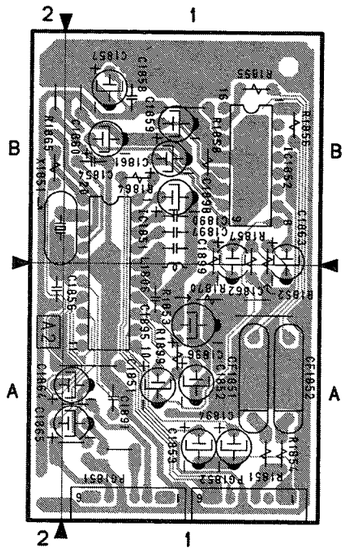
NIC. ATS CIRCUIT BOARDS -For F450E-



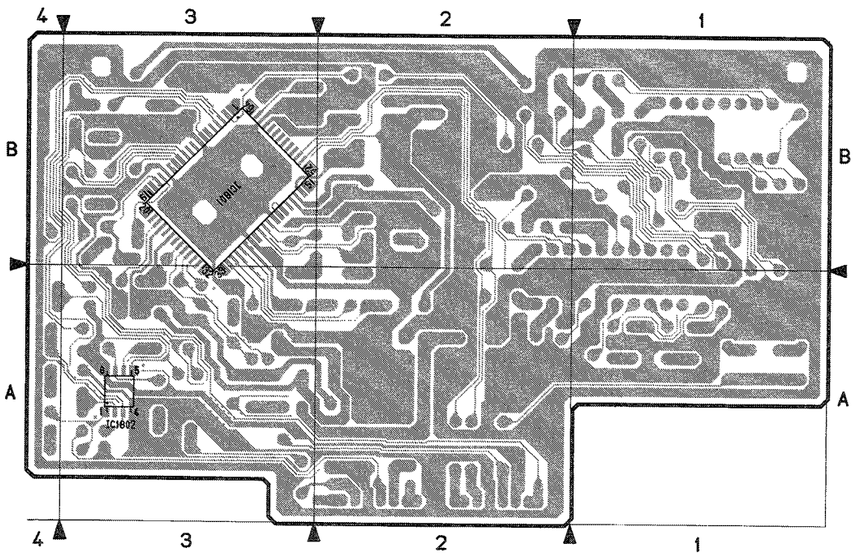
NIC[NICAM]-SIDE A-
[PATTERN No.JK1113-3]
[For VT-F450E(UKN)]



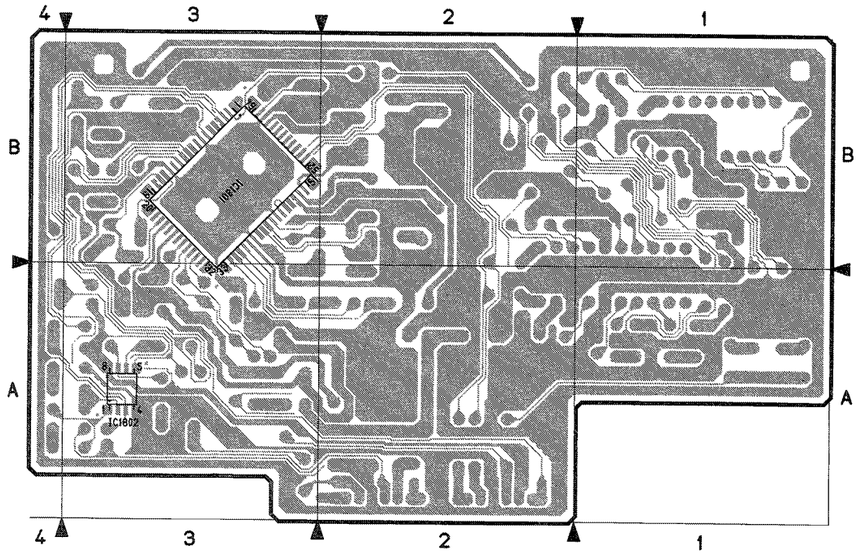
NIC[NICAM]-SIDE A-
[PATTERN No.JK1113-3]
[For VT-F450E(NA)]



ATS[A2]
[PATTERN No.JK1113-3]
[For VT-F450E(VPS)



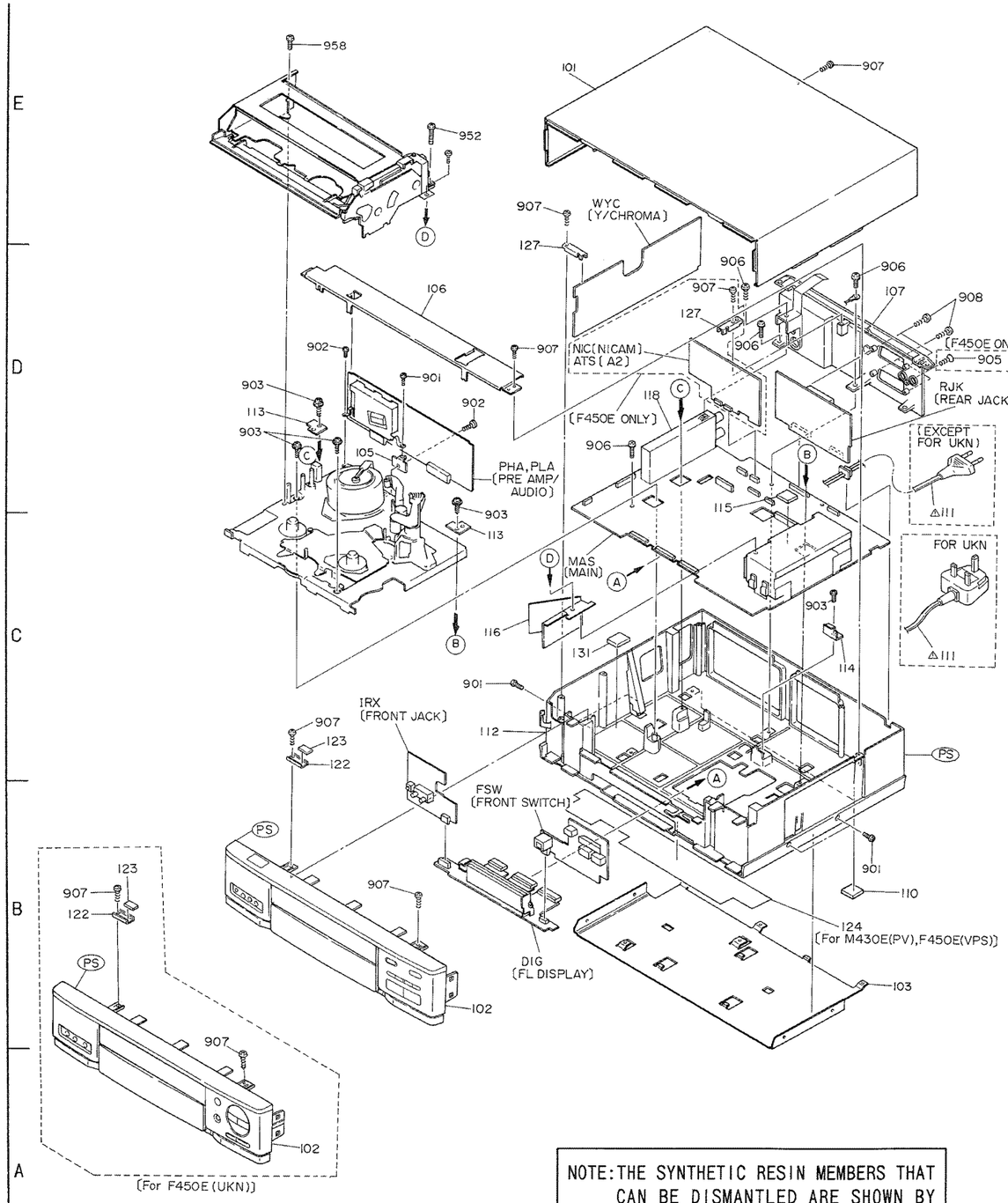
NIC[NICAM]-SIDE B-
[PATTERN No.JK1113-3]
[For VT-F450E(UKN)]



NIC[NICAM]-SIDE B-
[PATTERN No.JK1113-3]
[For VT-F450E(NA)]

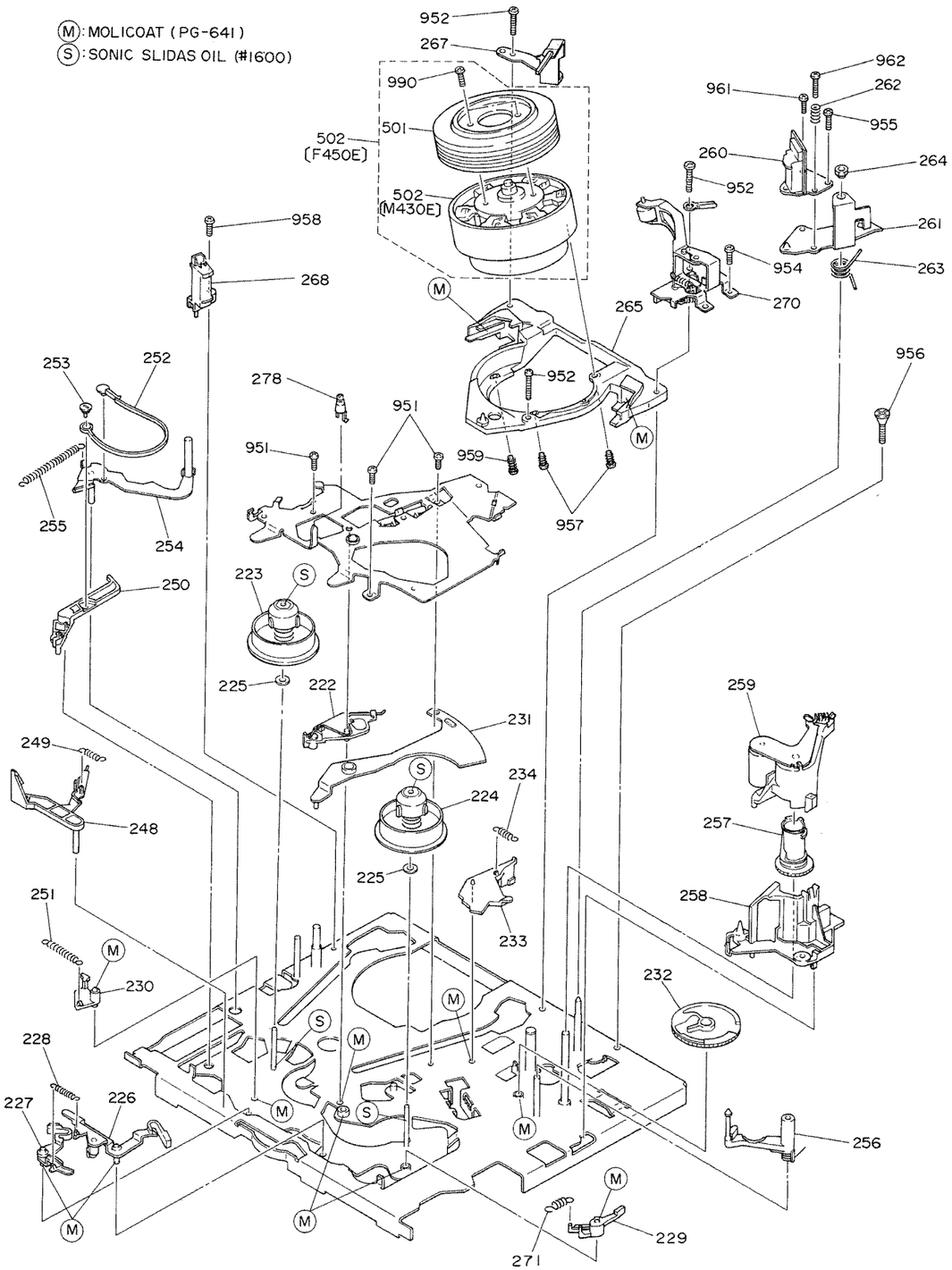
EXPLODED VIEWS

CABINET SECTION

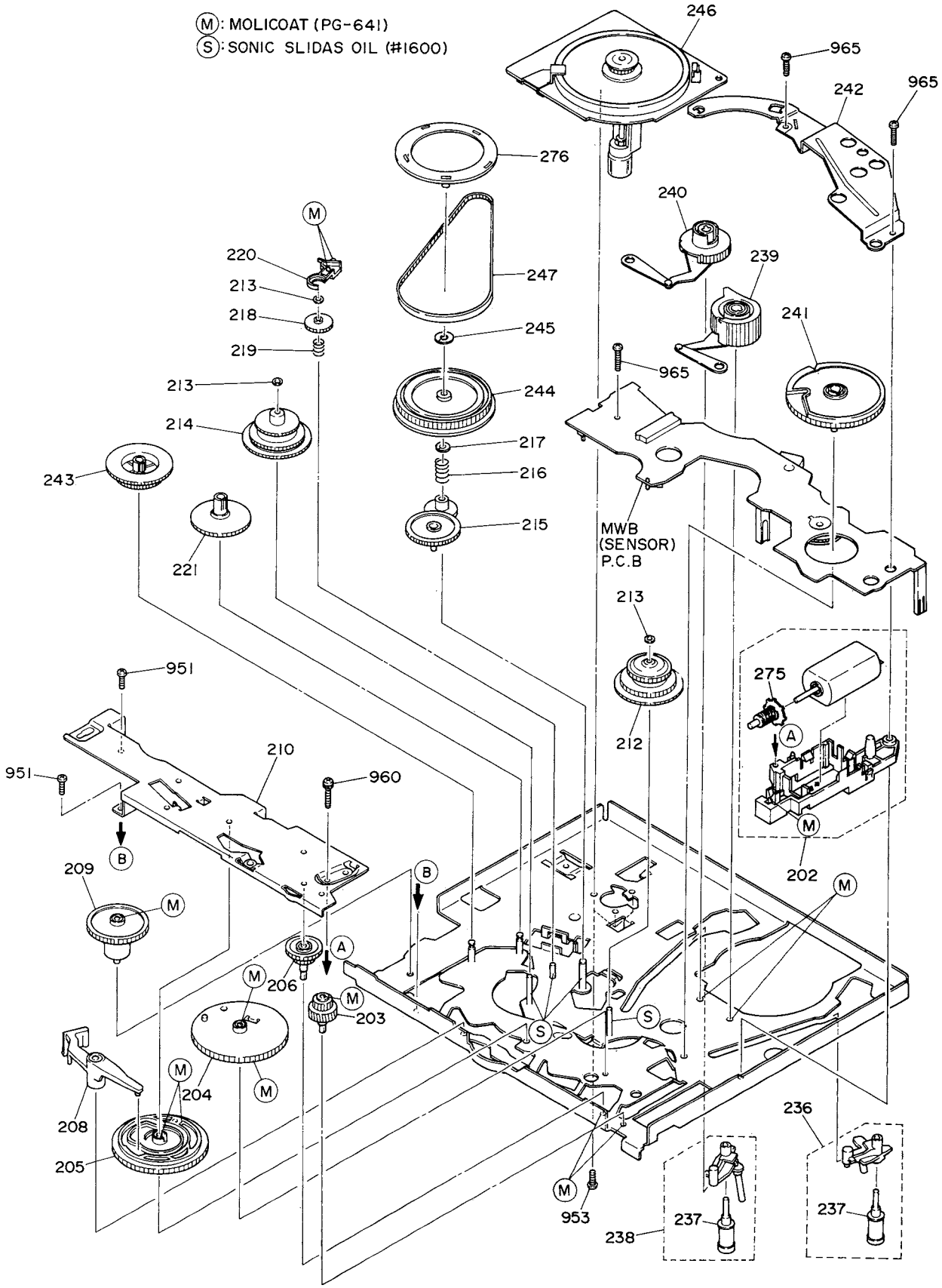


NOTE: THE SYNTHETIC RESIN MEMBERS THAT CAN BE DISMANTLED ARE SHOWN BY ABBREVIATIONS USING LETTERS.

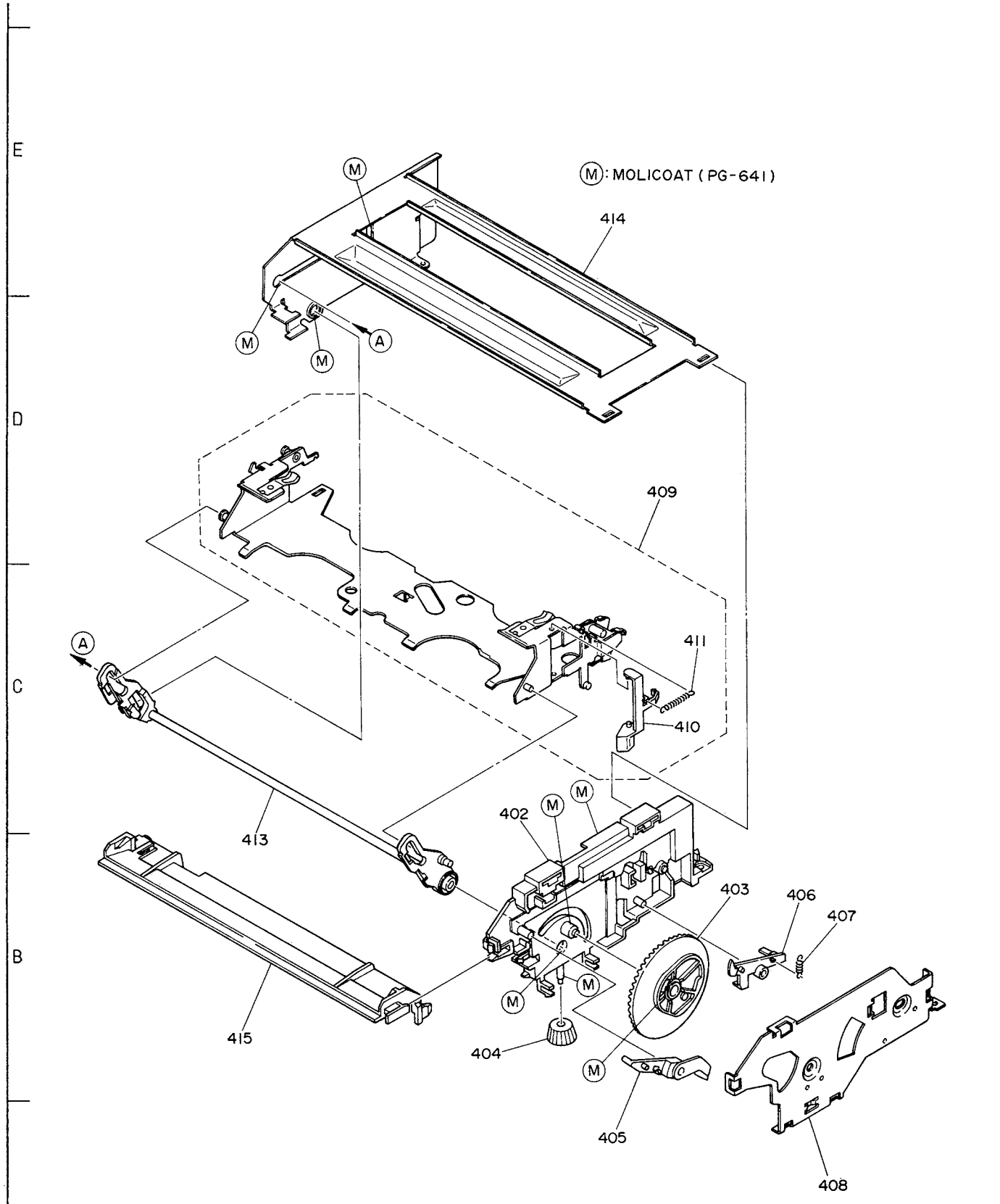
CHASSIS (1) SECTION



CHASSIS (II) SECTION



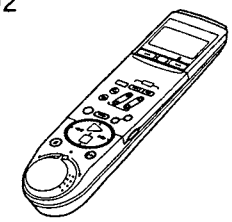
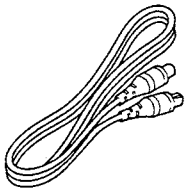
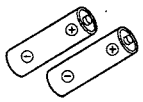
CASSETTE LOADING MECHANISM SECTION



REPLACEMENT PARTS LIST
1. MECHANICAL PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		FOR FINAL ASSEMBLY
101	QA10291	COVER, TOP(HCPUK)
102	PH10427	PANEL, FRONT
103	QA10281	COVER, BOTTOM (HCPUK)
105	NA10251	BRACKET
106	NA10231	BRACKET
107	PH10592	PANEL, REAR (HCPUK)
110	4330711	LEG
⚠111	5852854	CORD, POWER(HCPUK)
112	NT10251	FRAME(HCPUK)
113	NA10661	BRACKET
114	NA10241	BRACKET
115	MQ10193	HOLDER, RUBBER
116	MD10421	PLATE, SHIELD
118	HC10151	TUNER IF UNIT(HCPUK)
122	NA11031	BRACKET, FL(HCPUK)
123	MQ10195	HOLDER, RUBBER(HCPUK)
124	MD10541	PLATE, SHIELD(PV)
127	NA10691	BRACKET, PWB(HCPUK)
131	MQ10196	RUBBER(HCPUK)
202	6500761	MOTOR, LOADING
203	6441371	GEAR
204	6441392	GEAR
205	6406341	GEAR
206	6441381	GEAR
208	6823171	ARM, OPERATION
209	6441421	GEAR
210	6500332	PLATE
212	KF10271	GEAR, TAKE-UP
213	7788347	WASHER
214	6406291	GEAR(R)
215	6401445	ARM
216	6522979	SPRING
217	6500841	WASHER
218	6441433	GEAR, CHANGE
219	6522978	SPRING
220	6823183	ARM
221	6441411	GEAR
222	6823314	ARM
223	6416632	REEL, TABLE(S)
224	6404141	REEL, TABLE(T)
225	4583333	WASHER
226	4589851	ARM, BRAKE(R)
227	6823229	ARM, BRAKE(L)
228	6318613	SPRING
229	6823272	BRAKE
230	6823261	BRAKE
231	4588971	ARM
232	6823251	GEAR
233	6823292	BRAKE
234	6558453	SPRING
236	6638942	BASE, GUIDE ROLLER(I)
237	6358561	GUIDE ROLLER
238	6638955	BASE, GUIDE ROLLER(O)
239	6500507	GEAR LOADING(L)
240	6500463	GEAR, LOADING(R)
241	6823538	GEAR, MODE
242	KX10181	BRACKET
243	6823542	GEAR
244	6406332	PULLY, TAKE UP
245	6500841	WASHER
246	GP10123	MOTOR, CAPSTAN
247	6358101	BELT
248	6823424	ARM
249	6553361	SPRING
250	6823437	ARM, OPERATION
251	6553301	SPRING
252	6823474	BAND, TENSION
253	6823511	SHAFT
254	4825252	ARM, TENTION
255	6553352	SPRING
256	6638936	ARM
257	6823521	GEAR, CAM
258	6823445	BRACKET
259	6500431	ROLLER, PRESSURE
260	5434153	HEAD
261	4589841	BASE, HEAD
262	6554301	SPRING
263	6553151	SPRING
264	7785673	NUT
265	6638905	BASE, CYLINDER
267	5794062	BRUSH
268	5423081	HEAD, FULL ERASE
270	NA10561	BRACKET (HEPM)
271	6558502	SPRING
275	6816211	WORM
276	6358591	CAP
278	4587651	PIECE
402	6823613	BRACKET
403	6823621	GEAR
404	6823631	GEAR
405	6823642	ARM
406	6823653	ARM
407	6558531	SPRING
408	6500612	BRACKET
409	6500623	HOLDER
410	6823691	ARM
411	6558541	SPRING
413	6823663	ARM
414	6500672	BRACKET
415	6823701	HOLDER
501	5436753	CYLINDER, UPPER (CY-G4SL)
502	HX10192	CYLINDER, LOWER(CY-G4SM)
901	8679408	SCREW (3.0X8)
902	0671305	DT SCREW-2.6MMDX5MM
903	7781138	SCREW(3X10BT)
906	7784323	SCREW(3X8)
907	8699412	SCREW (3X12) BLACK
908	8699414	SCREW(3X14)
951	0711304	SCREW(2.6X4)
952	0711312	PAN HEAD SCREW - 2.6MMD X 12MM
953	8691306	BT SCREW 2.6MM
954	0711306	PAN HEAD SCREW-2.6MMDX6MM
955	7773741	SCREW
956	4528181	SCREW
957	7775582	SCREW
958	0671308	DT SCREW-2.6MMDX8MM
959	8741408	SCREW (B3X8)
960	8650914	SCREW(2.6X14)
961	8741306	SCREW(2.6X6)
962	8741312	SPRING
965	MJ10251	SCREW(M2.6)
990	7784131	SCREW (3X8)
		FOR ACCESSORIES
802	HL10372	REMOTE HAND SET(VT-RM454E)
803	5858311	CONNECTION CORD
804	PH11521	COVER, JACK

Accessories supplied

802  Remote Control Handset	803  Aerial cable for connecting this VCR and a TV	804 Dust preventive cover for EDIT IN/OUT, VIDEO IN and AUDIO IN sockets on the front of the VCR	 2 pcs. Battries for remote control handset (R6)

2. ELECTRICAL PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		CAPACITORS
C0201	0209904	CERAMIC DISC 560PF+-5% 50V
C0202	0209856	CERAMIC DISC 220PF+-5% 50V
C0203	0209891	CERAMIC CHIP 12PF+-5% 50V
C0204	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0205	0800039	ELECTROLYTIC 47UF 10V
C0206	0893082	CERAMIC CHIP 0.022UF
C0207	0209854	CERAMIC DISC 330PF+-5% 50V
C0208	0209899	CERAMIC DISC 120PF+-5% 50V
C0209	0209895	CERAMIC CHIP 39PF+-5% 50V
C0210	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0211	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0212	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0213	0893082	CERAMIC CHIP 0.022UF
C0214	0209897	CERAMIC CHIP 56PF+-5% 50V
C0215	0893082	CERAMIC CHIP 0.022UF
C0216	0800109	ELECTROLYTIC 1.0UF 50V
C0217	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0218	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0219	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0220	0893082	CERAMIC CHIP 0.022UF
C0221	0800122	ELECTROLYTIC 10UF 16V
C0222	0209852	CERAMIC CHIP 180PF+-5% 50V
C0223	0209846	CERAMIC CHIP 33PF+-5% 50V
C0224	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C0225	0217637	CAPACITOR 1.0UF+-20% 16V
C0226	0893082	CERAMIC CHIP 0.022UF
C0227	0207456	ELECTROLYTIC 1UF 50V
C0228	0209849	CERAMIC CHIP 390PF+-5% 50V
C0229	0209892	CERAMIC CHIP 18PF+-5% 50V
C0230	0893082	CERAMIC CHIP 0.022UF
C0231	0800122	ELECTROLYTIC 10UF 16V
C0232	0893082	CERAMIC CHIP 0.022UF
C0233	0893082	CERAMIC CHIP 0.022UF
C0234	0800122	ELECTROLYTIC 10UF 16V
C0235	0800351	ELECTROLYTIC 470UF 6.3V
C0236	0800122	ELECTROLYTIC 10UF 16V
C0237	0800103	ELECTROLYTIC 0.22UF 50V
C0238	0893082	CERAMIC CHIP 0.022UF
C0239	0893082	CERAMIC CHIP 0.022UF
C0240	0893082	CERAMIC CHIP 0.022UF
C0241	0217637	CAPACITOR 1.0UF+-20% 16V
C0242	0893082	CERAMIC CHIP 0.022UF
C0243	0893082	CERAMIC CHIP 0.022UF
C0244	0800109	ELECTROLYTIC 1.0UF 50V
C0245	0800109	ELECTROLYTIC 1.0UF 50V
C0246	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0247	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0248	0800109	ELECTROLYTIC 1.0UF 50V
C0249	0217637	CAPACITOR 1.0UF+-20% 16V
C0250	0893082	CERAMIC CHIP 0.022UF
C0253	0209894	CERAMIC CHIP 27PF+-10% 50V
C0254	0209892	CERAMIC CHIP 18PF+-5% 50V
C0255	0209875	CERAMIC CHIP 5PF+-10% 50V
C0256	0209880	CERAMIC CHIP 10PF+-0.5% 50V
C0257	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C0259	0893082	CERAMIC CHIP 0.022UF
C0260	0893082	CERAMIC CHIP 0.022UF
C0261	0209899	CERAMIC DISC 120PF+-5% 50V
C0262	0209847	CERAMIC CHIP 82PF+-10% 50V
C0263	0209846	CERAMIC CHIP 33PF+-5% 50V
C0265	0893082	CERAMIC CHIP 0.022UF
C0266	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0267	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0268	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0270	0209894	CERAMIC CHIP 27PF+-10% 50V
C0271	0209847	CERAMIC CHIP 82PF+-10% 50V
C0273	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0274	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0275	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0276	0209846	CERAMIC CHIP 33PF+-5% 50V
C0301	0800109	ELECTROLYTIC 1.0UF 50V
C0302	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C0303	0800351	ELECTROLYTIC 470UF 6.3V
C0304	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0305	0800109	ELECTROLYTIC 1.0UF 50V
C0307	0893082	CERAMIC CHIP 0.022UF
C0308	0209895	CERAMIC CHIP 39PF+-5% 50V
C0309	0893035	CERAMIC CHIP 2200PF+-10% 50V
C0310	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0381	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0383	0209895	CERAMIC CHIP 39PF+-5% 50V
C0401	0800032	ELECTROLYTIC 33UF 16V
C0402	0209641	CERAMIC DISC 10000PF+-10% 16V
C0403	0207456	ELECTROLYTIC 1UF 50V
C0404	0800109	ELECTROLYTIC 1.0UF 50V
C0405	0800007	ELECTROLYTIC 3.3UF 50V
C0406	0800012	ELECTROLYTIC 4.7UF 50V
C0407	0800003	ELECTROLYTIC 1UF 50V
C0408	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C0409	0800018	ELECTROLYTIC 10UF 50V
C0410	0890035	CERAMIC DISC 1000PF+-10% 50V
C0411	0890094	CERAMIC DISC 3300PF+-10% 25V
C0412	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0413	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0414	0800042	ELECTROLYTIC 47UF 25V
C0415	0268449	MYLAR 0.047UF+-5% 100V
C0416	0800122	ELECTROLYTIC 10UF 16V
C0417	0800122	ELECTROLYTIC 10UF 16V
C0418	0800003	ELECTROLYTIC 1UF 50V
C0419	0800122	ELECTROLYTIC 10UF 16V
C0420	0800012	ELECTROLYTIC 4.7UF 50V
C0422	0890022	CERAMIC DISC 100PF+-10% 50V
C0423	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C0424	0800041	ELECTROLYTIC 47UF 16V
C0425	0800122	ELECTROLYTIC 10UF 16V
C0426	0800018	ELECTROLYTIC 10UF 50V
C0427	0800018	ELECTROLYTIC 10UF 50V
C0429	0800117	ELECTROLYTIC 4.7UF 25V
C0430	0207462	ELECTROLYTIC 47UF+-20% 16V
C0438	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C0439	0890035	CERAMIC DISC 1000PF+-10% 50V
C0440	0800109	ELECTROLYTIC 1.0UF 50V
C0445	0890022	CERAMIC DISC 100PF+-10% 50V
C0601	0207444	ELECTROLYTIC 1.0UF 50V
C0602	0893002	CERAMIC CHIP 0.033UF+-10% 16V
C0603	0893059	CERAMIC CHIP 0.47UF+80-20% 16V
C0604	0800179	ELECTROLYTIC 10UF 16V
C0605	0800179	ELECTROLYTIC 10UF 16V
C0606	0893074	CERAMIC CHIP 1500PF+80-20% 50V
C0607	0893058	CERAMIC CHIP 0.33UF+80-20% 16V
C0608	0893073	CERAMIC CHIP 1000PF+80-20% 50V
C0609	0800183	ELECTROLYTIC 33UF 10V
C0610	0800179	ELECTROLYTIC 10UF 16V
C0611	0209934	CERAMIC CHIP 22PF+-5% 50V
C0612	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0613	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0614	0890045	CERAMIC DISC 0.047UF+80-20% 50V

SYMBOL-NO	P-NO	DESCRIPTION
C0615	0893088	CERAMIC CHIP 0.015UF+-10% 16V
C0616	0800176	ELECTROLYTIC 2.2UF 50V
C0617	0893006	CERAMIC CHIP 0.068UF+-10% 16V
C0618	0800183	ELECTROLYTIC 33UF 10V
C0619	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0620	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0625	0890039	CERAMIC DISC 4700PF+-20% 16V
C0626	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0627	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0628	0800145	ELECTROLYTIC 100UF 16V
C0651	0800179	ELECTROLYTIC 10UF 16V
C0652	0800179	ELECTROLYTIC 10UF 16V
C0653	0800182	ELECTROLYTIC 22UF 16V
C0654	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0655	0209854	CERAMIC DISC 330PF+-5% 50V
C0656	0209899	CERAMIC DISC 120PF+-5% 50V
C0657	0209906	CERAMIC DISC 820PF+-5% 50V
C0751	0890035	CERAMIC DISC 1000PF+-10% 50V
C0752	0890035	CERAMIC DISC 1000PF+-10% 50V
C0753	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C0761	0800039	ELECTROLYTIC 47UF 10V
⚠C0851	AN10201S	FILM CAPACITOR 0.1UF+-20% 250V
⚠C0852	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0853	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0854	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0855	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0856	0235992	CERAMIC DISC 2200PF 250V
⚠C0857	0235992	CERAMIC DISC 2200PF 250V
⚠C0858	0235992	CERAMIC DISC 2200PF 250V
C0859	0254241	ELECTROLYTIC 82UF 400V
C0860	0204284	ELECTROLYTIC 0.047UF 250V
C0861	1143004	CERAMIC CHIP 150PF+-5% 1KV
C0863	0890022	CERAMIC DISC 100PF+-10% 50V
C0864	0890035	CERAMIC DISC 1000PF+-10% 50V
C0865	0254384	ELECTROLYTIC 47UF 63V
C0866	0800324	ELECTROLYTIC 100UF 6.3V
⚠C0867	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0868	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0869	AN10201S	FILM CAPACITOR 0.1UF+-20% 250V
C0871	0254384	ELECTROLYTIC 47UF 63V
C0872	0254324	ELECTROLYTIC 1000UF 35V
C0873	0254396	ELECTROLYTIC 470UF 25V
C0874	0254384	ELECTROLYTIC 47UF 63V
C0875	0254395	ELECTROLYTIC 220UF 10V
C0876	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0877	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0878	0254325	ELECTROLYTIC 2200UF 16V
C0879	0254397	ELECTROLYTIC 820UF 16V
C0880	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0881	0800286	CAPASITOR 4.7UF+-20% 25V
C0883	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C0884	AJ10131R	CERAMIC CAPACITOR 470PF+-10% 500V
C0885	1143002	CERAMIC DISC 100PF 500V
C0887	1143002	CERAMIC DISC 100PF 500V
C0901	0800117	ELECTROLYTIC 4.7UF 25V
C0902	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C0903	0800138	ELECTROLYTIC 47UF 6.3V
C0904	0217516	CAPACITOR 0.047UF+80-20% 5.5V
C0905	0800112	ELECTROLYTIC 2.2UF 50V
C0906	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0908	0209934	CERAMIC CHIP 22PF+-5% 50V
C0909	0209934	CERAMIC CHIP 22PF+-5% 50V
C0912	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0914	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0915	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0916	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0917	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0918	0800135	ELECTROLYTIC 33UF 16V
C0919	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0920	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0922	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0923	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0926	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0927	0800123	ELECTROLYTIC 10UF 25V
C0928	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0930	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0931	0893027	CERAMIC CHIP 0.1UF+-10% 25V
C0932	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0933	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0934	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C101	0893008	CERAMIC CHIP 0.1UF +-10% 16V (PV)
C102	0806037	ELECTROLYTIC 10UF 6.3V (PV)
C103	0893008	CERAMIC CHIP 0.1UF +-10% 16V (PV)
C104	0893058	CERAMIC CHIP 0.33UF+80-20% 16V(PV)
C105	0201066	CERAMIC CHIP 0.033UF+-10% 25V (PV)
C106	0201057	CERAMIC CHIP 0.0022UF+-10% 50V(PV)
C1121	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1122	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1123	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1124	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1125	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1126	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1127	0890037	CERAMIC DISC 2200PF+-20% 16V
C1128	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1129	0890037	CERAMIC DISC 2200PF+-20% 16V
C1130	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C1131	0800139	ELECTROLYITC 47UF 10V
C1132	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1133	0890008	CERAMIC DISC 10PF+-5% 50V
C1134	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C1136	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1138	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1151	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1152	0890022	CERAMIC DISC 100PF+-10% 50V
C1153	0890024	CERAMIC DISC 150PF+-10% 50V
C1155	0890043	CERAMIC DISC 0.01UF+-20% 16V
C1401	0217637	CAPACITOR 1.0UF+-20% 16V
C1402	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C1403	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C1404	0800279	CAPACITOR 1.0UF+-20% 50V
C1405	0800175	ELECTROLYTIC 1.0UF 50V
C1407	0207404	ELECTROLYTIC 4.7UF 35V
C1408	0209928	CERAMIC DISC 8PF+-5% 50V
C1409	0209928	CERAMIC DISC 8PF+-5% 50V
C1411	0209936	CERAMIC CHIP 33PF+-5% 50V
C1412	0209934	CERAMIC CHIP 22PF+-5% 50V
C1441	0800047	ELECTROLYTIC 100UF 6.3V
C1442	0209898	CERAMIC CHIP 100PF+-5% 50V
C1443	0880005	POLYESTER FILM 2200PF+-10% 50V
C1444	0800175	ELECTROLYTIC 1.0UF 50V
C1451	0209950	CERAMIC CHIP 470PF+-5% 50V
C1452	0800179	ELECTROLYTIC 10UF 16V
C1481	0217637	CAPACITOR 1.0UF+-20% 16V
C1484	0209846	CERAMIC CHIP 33PF+-5% 50V
C1485	0209896	CERAMIC CHIP 47PF+-5% 50V
C1486	0207455	ELECTROLYTIC 33UF 16V
C1488	0217637	CAPACITOR 1.0UF+-20% 16V
C1491	0800178	ELECTROLYTIC 4.7UF 35V
C1492	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2101	0890045	CERAMIC DISC 0.047UF+80-20% 50V

SYMBOL-NO	P-NO	DESCRIPTION
C2502	0209846	CERAMIC CHIP 33PF+-5% 50V
C2503	0217637	CAPACITOR 1.0UF+-20% 16V
C2504	0800044	ELECTROLYTIC 47UF 50V
C2505	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2506	0217637	CAPACITOR 1.0UF+-20% 16V
C2507	0800041	ELECTROLYTIC 47UF 16V
C2510	0800186	ELECTROLYTIC 47UF 16V
C2511	0800173	ELECTROLYTIC 0.33UF 50V
C2512	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C2514	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C2515	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C2516	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C2517L	0800179	ELECTROLYTIC 10UF 16V
C2518	0800179	ELECTROLYTIC 10UF 16V
C2519	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C2520	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2521	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C2522	0207446	ELECTROLYTIC 10UF+-20% 16V
C2523	0207446	ELECTROLYTIC 10UF+-20% 16V
C2524	0207446	ELECTROLYTIC 10UF+-20% 16V
C2525	0207446	ELECTROLYTIC 10UF+-20% 16V
C2526	0893073	CERAMIC CHIP 1000PF+80-20% 50V
C2571	0207446	ELECTROLYTIC 10UF+-20% 16V
C2572	0800179	ELECTROLYTIC 10UF 16V
C2573	0800179	ELECTROLYTIC 10UF 16V
C2575	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2576	0209897	CERAMIC CHIP 56PF+-5% 50V
C2577	0209897	CERAMIC CHIP 56PF+-5% 50V
C2578	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C2584	0800178	ELECTROLYTIC 4.7UF 35V
C2585	0800178	ELECTROLYTIC 4.7UF 35V
C2586	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C2593	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2851	0800174	ELECTROLYTIC 0.47UF 50V
C2852	0800174	ELECTROLYTIC 0.47UF 50V
C4511	0255138	ELECTROLYTIC 470UF 6.3V
C4512	0800144	ELECTROLYTIC 100UF 10V
C4513	0800109	ELECTROLYTIC 1.0UF 50V
C4514	0800109	ELECTROLYTIC 1.0UF 50V
C4516	0217637	CAPACITOR 1.0UF+-20% 16V
C4517	0800109	ELECTROLYTIC 1.0UF 50V
C4518	0800109	ELECTROLYTIC 1.0UF 50V
C4519	0217637	CAPACITOR 1.0UF+-20% 16V
C4520	0255138	ELECTROLYTIC 470UF 6.3V
C4541L	0800122	ELECTROLYTIC 10UF 16V
C4541R	0800122	ELECTROLYTIC 10UF 16V
C4542L	0800122	ELECTROLYTIC 10UF 16V
C4542R	0800122	ELECTROLYTIC 10UF 16V
C4551L	0800122	ELECTROLYTIC 10UF 16V
C4551R	0800122	ELECTROLYTIC 10UF 16V
C4552L	0800122	ELECTROLYTIC 10UF 16V
C4552R	0800122	ELECTROLYTIC 10UF 16V
C4553L	0800122	ELECTROLYTIC 10UF 16V
C4553R	0800122	ELECTROLYTIC 10UF 16V
C4554L	0800122	ELECTROLYTIC 10UF 16V
C4554R	0800122	ELECTROLYTIC 10UF 16V
C4555L	0800122	ELECTROLYTIC 10UF 16V
C4555R	0800122	ELECTROLYTIC 10UF 16V
C4556L	0800122	ELECTROLYTIC 10UF 16V
C4556R	0800122	ELECTROLYTIC 10UF 16V
C4557	0800145	ELECTROLYTIC 100UF 16V
C4558	0893004	CERAMIC CHIP 0.047UF+-10% 16V
C4559	0800145	ELECTROLYTIC 100UF 16V
C4581L	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4581R	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4582L	0209856	CERAMIC DISC 220PF+-5% 50V
C4582R	0209856	CERAMIC DISC 220PF+-5% 50V
C4583L	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4583R	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4584L	0209856	CERAMIC DISC 220PF+-5% 50V
C4584R	0209856	CERAMIC DISC 220PF+-5% 50V

RESISTORS

R0201	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0203	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W
R0204	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R0205	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0206	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
R0207	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R0208	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0209	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R0210	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R0211	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0212	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0213	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0214	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0215	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0216	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R0217	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R0218	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0219	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0221	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0222	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0223	0103839	CHIP RESISTOR 470 OHM+-5% 0.1W
R0224	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0227	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R0228	0103891	CHIP RESISTOR 1.6KOHM+-5% 1/8W
R0229	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0230	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W
R0231	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0232	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0233	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0234	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R0236	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0239	0103870	CHIP RESISTOR 180KOHM+-5% 0.1W
R0242	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0243	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0244	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0245	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0246	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0247	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0248	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R0249	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0250	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0251	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0252	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0256	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0260	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0261	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R0270	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0271	0103832	CHIP RESISTOR 120OHM+-5% 0.1W
R0272	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0273	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0274	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0279	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0280	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R0281	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
R0302	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R0303	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R0304	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0306	0103838	RESISTOR CHIP 390OHM+-5% 0.1W
R0307	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R0381	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0401	0700028	CARBON FILM 120OHM+-5% 1/8W
R0402	0700074	CARBON FILM 330KOHM+-5% 1/8W
R0403	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0404	0700053	CARBON FILM 8.2KOHM+-5% 1/8W
R0405	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R0406	0700047	CARBON FILM 3.3KOHM+-5% 1/8W
R0407	0700081	CARBON FILM 1.0MOHM+-5% 1/8W
R0408	0700048	CARBON FILM 3.9KOHM+-5% 1/8W
R0409	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
R0410	0700055	CARBON FILM 12KOHM+-5% 1/8W
R0411	0700055	CARBON FILM 12KOHM+-5% 1/8W
R0412	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0413	0700036	CARBON FILM 470 OHM+-5% 1/8W
R0414	0700059	CARBON FILM 27KOHM+-5% 1/8W
R0415	0700009	CARBON FILM 4.7OHM+-5% 1/8W
R0416	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0417	0700023	CARBON FILM 47OHM+-5% 1/8W
R0419	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0420	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R0421	0700074	CARBON FILM 330KOHM+-5% 1/8W
R0423	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R0424	0700051	CARBON FILM 5.6KOHM+-5% 1/8W
R0433	0700062	CARBON FILM 39KOHM+-5% 1/8W
R0436	0700072	CARBON FILM 220KOHM+-5% 1/8W
R0437	0700072	CARBON FILM 220KOHM+-5% 1/8W
R0438	0700061	CARBON FILM 33KOHM+-5% 1/8W
R0440	0700047	CARBON FILM 3.3KOHM+-5% 1/8W
R0441	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0442	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0445	0700032	CARBON FILM 220 OHM+-5% 1/8W
R0449	0700039	CARBON FILM 820OHM+-5% 1/8W
R0450	0700048	CARBON FILM 3.9KOHM+-5% 1/8W
R0452	0700064	CARBON FILM 56KOHM+-5% 1/8W
R0453	0700031	CARBON FILM 180OHM+-5% 1/8W
R0454	0700064	CARBON FILM 56KOHM+-5% 1/8W
R0460	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0461	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R0601	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0602	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0603	0103872	CHIP RESISTOR 270KOHM+-5% 0.1W
R0604	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0605	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0606	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0607	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0608	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0609	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0610	0103868	CHIP RESISTOR 120KOHM+-5% 0.1W
R0611	0103865	CHIP RESISTOR 68KOHM+-5% 0.1W
R0612	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0613	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0614	0103865	CHIP RESISTOR 68KOHM+-5% 0.1W
R0615	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0616	0700037	CARBON FILM 560OHM+-5% 1/8W
R0617	0700037	CARBON FILM 560OHM+-5% 1/8W
R0618	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0619	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R0620	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0621	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0622	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0623	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0624	0700045	CARBON FILM 2.2KOHM+-5% 1/8W

SYMBOL-NO	P-NO	DESCRIPTION
R0625	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0626	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0628	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0629	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0630	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0631	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0632	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0633	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0651	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0652	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0653	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0654	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0655	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0656	0103878	CHIP RESISTOR 820KOHM+-5% 0.1W
R0657	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0658	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0701	0700044	CARBON FILM 1.8KOHM+-5% 1/8W
R0703	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0704	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0705	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0706	0700042	CARBON FILM 1.2KOHM+-5% 1/8W
R0708	0700043	CARBON FILM 1.5KOHM+-5% 1/8W
R0709	0700029	CARBON FILM 150 OHM+-5% 1/8W
R0710	0700044	CARBON FILM 1.8KOHM+-5% 1/8W
R0711	0700051	CARBON FILM 5.6KOHM+-5% 1/8W
R0712	0700033	CARBON FILM 270OHM+-5% 1/8W
R0714	0700062	CARBON FILM 39KOHM+-5% 1/8W
⚠R0852	AT10211M	CHIP RESISTOR 1MOHM 1/2W
R0854	0116671	RESISTOR 100KOHM+-5% 3w
R0855	0116672	RESISTOR 0.68 OHM+-5% 3W
R0856	0113525	CARBON FILM 220KOHM+-5% 1/2W
R0857	0113525	CARBON FILM 220KOHM+-5% 1/2W
R0858	0101868	CARBON FILM 4.7MOHM+-5% 1/4W
R0859	0101868	CARBON FILM 4.7MOHM+-5% 1/4W
R0862	0700034	CARBON FILM 330OHM+-5% 1/8W
R0863	0116671	RESISTOR 100KOHM+-5% 3w
R0864	0101818	CARBON FILM 56OHM+-5%1/4W
R0865	0101812	RESISTOR 18 OHM+-5% 1/4W
R0866	0700043	CARBON FILM 1.5KOHM+-5% 1/8W
R0867	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0868	0700072	CARBON FILM 220KOHM+-5% 1/8W
R0881	0700013	CHIP RESISTOR 8.2 OHM+-5% 1/8W
R0882	0700012	CARBON FILM 6.8 OHM+-5% 1/8W
R0888	0101841	CARBON FILM 4.7KOHM+-5% 1/4W
R0889	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W
R0890	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0891	0105124	CHIP RESISTOR 4700 OHM+-1% 1/10W
R0892	0104268	CHIP RESISTOR 3KOHM+-1% 0.1W
R0893	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0894	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R0895	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R0896	0104279	CHIP RESISTOR 100 OHM+-1% 1/10W
R0901	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0902	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0903	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0904	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0905	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0906	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0907	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0908	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0909	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0910	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0911	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0912	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0913	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R0914	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0915	0104111	CHIP RESISTOR 10KOHM+-1% 1/10W
R0917	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0918	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0919	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0920	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0921	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0922	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0923	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R0924	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R0925	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0926	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0927	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0928	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R0929	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0930	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0931	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0932	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0933	0700039	CARBON FILM 8200HM+-5% 1/8W
R0934	0700039	CARBON FILM 8200HM+-5% 1/8W
R0935	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0936	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0937	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0938	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0939	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0940	0700043	CARBON FILM 1.5KOHM+-5% 1/8W
R0941	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0942	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0943	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0944	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0945	0105515	CHIP RESISTOR 4.7MOHM+-5% 1/10W
R0946	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R0947	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R0948	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0949	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0950	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0951	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0952	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0953	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0954	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0955	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0956	0700031	CARBON FILM 1800HM+-5% 1/8W
R0957	0700033	CARBON FILM 2700HM+-5% 1/8W
R0958	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0959	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0960	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0961	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0965	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0972	0700066	CARBON FILM 82KOHM+-5% 1/8W
R0973	0700066	CARBON FILM 82KOHM+-5% 1/8W
R0974	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0975	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0976	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R0977	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0978	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0982	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0983	0700037	CARBON FILM 5600HM+-5% 1/8W
R0984	0700036	CARBON FILM 470 OHM+-5% 1/8W
R0985	0700037	CARBON FILM 5600HM+-5% 1/8W
R0986	0700037	CARBON FILM 5600HM+-5% 1/8W
R0987	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0988	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0989	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R101	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W (PV)
R102	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W (PV)
R103	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W(PV)
R104	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W (PV)
R106	0104005	METAL FILM 1.2MOHM+-5% 0.1W (PV)
R108	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W(PV)
R109	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W(PV)
R110	0104005	METAL FILM 1.2MOHM+-5% 0.1W (PV)
R1121	0700058	CARBON FILM 22KOHM+-5% 1/8W
R1122	0700058	CARBON FILM 22KOHM+-5% 1/8W
R1123	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
R1402	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R1403	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R1404	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R1413	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R1414	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R1415	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R1416	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R1417	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R1441	0105142	CHIP RESISTOR 16.2KOHM+-1% 1/10W
R1442	0104278	CARBON FILM 120KOHM+-1% 1/10W
R1443	0103875	CHIP RESISTOR 470KOHM+-5% 0.1W
R1444	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R1451	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R1452	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R1454	0700034	CARBON FILM 3300HM+-5% 1/8W
R1455	0103876	CHIP RESISTOR 560KOHM+-5% 0.1W
R1456	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R1485	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R1486	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1487	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R1489	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R1491	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R1492	0700027	CARBON FILM 100 OHM+-5% 1/8W
R2501	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2502	0101841	CARBON FILM 4.7KOHM+-5% 1/4W
R2503	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R2504	0103874	CHIP RESISTOR 390KOHM+-5% 0.1W
R2505	0103874	CHIP RESISTOR 390KOHM+-5% 0.1W
R2506	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2508	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R2509	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2510L	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R2510R	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R2511L	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2511R	0700063	CARBON FILM 47KOHM+-5% 1/8W
R2512L	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2512R	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2513	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R2514	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R2515	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2516	0700054	CARBON FILM 10KOHM+-5% 1/8W
R2517	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2518	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2519	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R2520	0103865	CHIP RESISTOR 68KOHM+-5% 0.1W
R2521	0103832	CHIP RESISTOR 1200HM+-5% 0.1W
R2522	0103832	CHIP RESISTOR 1200HM+-5% 0.1W
R2523	0700027	CARBON FILM 100 OHM+-5% 1/8W
R2524	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R2571	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R2572	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R2573	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R2574	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R2575	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2576	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R2577	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R2578	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2579	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R2581	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R2583	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R2584	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R2585	0101841	CARBON FILM 4.7KOHM+-5% 1/4W
R2586	0700067	CARBON FILM 100KOHM+-5% 1/8W
R2751	0700014	CARBON FILM 100HM+-5% 1/8W
R2851	0700058	CARBON FILM 22KOHM+-5% 1/8W
R2852	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R2853	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R2854	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
R2855	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R4501	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4511	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4512	0101927	CARBON FILM 330 OHM+-5% 1/4W
R4513	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4514	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R4515	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R4516	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R4517	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R4518	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4519	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4520	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4522	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4523	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4525	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4526	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4527	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4528	0101927	CARBON FILM 330 OHM+-5% 1/4W
R4529	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R4541L	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4541R	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4551L	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4551R	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4552	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4591	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
⚠RF0871	0101717	RESISTOR 68 OHM+-5% 1/6W
⚠RF0901	0101725	CHIP RESISTOR 2.2 OHM+-5% 1/4W
RT0601	5007902	SEMI VARIABLE 220KOHM
		SEMI-CONDUCTORS
D0201	5328301	DIODE MA151WK (MT)
D0203	5339131	DIODE 1SS254
D0204	5339131	DIODE 1SS254
D0206	5328301	DIODE MA151WK (MT)
D0401	5339141	DIODE 1SS270
D0402	5339141	DIODE 1SS270
D0403	5339141	DIODE 1SS270
D0405	5339141	DIODE 1SS270
D0601	5339131	DIODE 1SS254
D0602	5339131	DIODE 1SS254
D0603	5339231	DIODE 1SR35-100A
D0604	5339231	DIODE 1SR35-100A
⚠D0851	5336553	DIODE S1WBA60B
D0852	CH10191M	DIODE EG01C-T
D0853	CH10331M	DIODE EG01Z-T
D0855	CH10301M	DIODE RB721Q
D0871	5339592	DIODE D1NL40
D0872	CH10361S	DIODE ERC91-02
D0873	5339592	DIODE D1NL40
D0874	CH10331M	DIODE EG01Z-T
D0875	CH10352S	DIODE RK46
D0877	5339131	DIODE 1SS254

SYMBOL-NO	P-NO	DESCRIPTION
D0901	5339131	DIODE 1SS254
D0902	5339131	DIODE 1SS254
D0903	5339131	DIODE 1SS254
D0904	5339131	DIODE 1SS254
D0905	5339131	DIODE 1SS254
D0906	5339131	DIODE 1SS254
D0907	5339131	DIODE 1SS254
D0908	5339131	DIODE 1SS254
D0909	5339131	DIODE 1SS254
D0910	5339131	DIODE 1SS254
D0914	5339131	DIODE 1SS254
D0915	5339131	DIODE 1SS254
D0916	5339131	DIODE 1SS254
D0917	5339131	DIODE 1SS254
D0918	5339131	DIODE 1SS254
D0919	1330011	DIODE DINS4
D1401	5339131	DIODE 1SS254
D1411	5328381	DIODE MA153
D1491	5339131	DIODE 1SS254
D1492	5339131	DIODE 1SS254
D1493	5339131	DIODE 1SS254
D2101	5380933	LED GL451
D2502	5328302	DIODE MA151WA(MN)
D2503	5328301	DIODE MA151WK (MT)
D2504	5328381	DIODE MA153
D2584	5339131	DIODE 1SS254
D2585	5328301	DIODE MA151WK (MT)
D2703	5339131	DIODE 1SS254
D2704	5339131	DIODE 1SS254
D2708	5339131	DIODE 1SS254
D2709	5339131	DIODE 1SS254
D2751	5339131	DIODE 1SS254
IC0201	CK10811R	IC LA7439M
IC0202	CK10822R	IC LC89973M
IC0203	1346881	IC M52364P
IC0401	CP10221	IC LA7286
IC0402	1341691	IC NJM2234S
IC0404	1341693	IC NJM2233BSA
IC0601	1366863	IC HD49781F
IC0651	5352714	IC NJM4558M
IC0851	CW10132	IC STR-M6545
IC0871	1360452	IC TL431CLP
IC0901	CK11007	IC M38185ME-103FP
IC0902	CP10311R	IC PST9131
IC0903	CP10911	IC ST24C01CB1
IC0904	CP10291	IC BA6209
IC101	CP10641	IC SDA5649(PV)
IC1102	CP10281	IC LA7415
IC1401	1340782	IC M35010-013SP
IC1441	1352512	IC BA7046F
IC2101	5327521	PHOTO TRANSISTOR SPI-315-C
IC2102	5327521	PHOTO TRANSISTOR SPI-315-C
IC2521	CP10331	IC NJM2234L
IC4511	1361921	IC BA7630S
IC4551	CP10351	IC LA7151
IC4552	CP10351	IC LA7151
LED0751	CH10181G	LED
LED0752	CH10181G	LED
LED2701	1330302	DIODE SRZ989A-F
LED2702	1330302	DIODE SRZ989A-F
Q0202	5328971	TRANSISTOR 2SC2412KBRST
Q0204	5328793	TRANSISTOR DTC144K-26
Q0205	5328971	TRANSISTOR 2SC2412KBRST
Q0206	5328971	TRANSISTOR 2SC2412KBRST
Q0207	5328793	TRANSISTOR DTC144K-26

SYMBOL-NO	P-NO	DESCRIPTION
Q0208	5328971	TRANSISTOR 2SC2412KBRST
Q0210	5328971	TRANSISTOR 2SC2412KBRST
Q0211	5328971	TRANSISTOR 2SC2412KBRST
Q0212	5328793	TRANSISTOR DTC144K-26
Q0213	5328795	TRANSISTOR DTA144EK-16
Q0214	5328795	TRANSISTOR DTA144EK-16
Q0215	5328793	TRANSISTOR DTC144K-26
Q0221	5328793	TRANSISTOR DTC144K-26
Q0223	5328793	TRANSISTOR DTC144K-26
Q0224	5328793	TRANSISTOR DTC144K-26
Q0225	5328793	TRANSISTOR DTC144K-26
Q0301	5328971	TRANSISTOR 2SC2412KBRST
Q0302	5328971	TRANSISTOR 2SC2412KBRST
Q0381	5327141	TRANSISTOR 2SD468C
Q0383	5328795	TRANSISTOR DTA144EK-16
Q0384	5328793	TRANSISTOR DTC144K-26
Q0402	5327073	TRANSISTOR DTC144ES
Q0408	5323172	TRANSISTOR 2SC1214CD
Q0411	1320004	TRANSISTOR 2SA854SQR
Q0412	5327062	TRANSISTOR 2SC1740S-R
Q0601	5327141	TRANSISTOR 2SD468C
Q0871	5324863	TRANSISTOR 2SD2061
Q0874	1321341	TRANSISTOR 2SD1765
Q0875	5328793	TRANSISTOR DTC144K-26
Q0901	5328793	TRANSISTOR DTC144K-26
Q0902	5328331	TRANSISTOR 2SB709AR
Q0903	5327141	TRANSISTOR 2SD468C
Q0904	1323081	TRANSISTOR 2SA1036K
Q0905	5328971	TRANSISTOR 2SC2412KBRST
Q1401	5328971	TRANSISTOR 2SC2412KBRST
Q1404	5328971	TRANSISTOR 2SC2412KBRST
Q1405	5328971	TRANSISTOR 2SC2412KBRST
Q1451	5328971	TRANSISTOR 2SC2412KBRST
Q1482	5328962	TRANSISTOR 2SA1037K
Q1491	5327141	TRANSISTOR 2SD468C
Q1492	5327141	TRANSISTOR 2SD468C
Q2101	5324661	PHOTO TRANSISTOR PT-483F1H
Q2102	5324661	PHOTO TRANSISTOR PT-483F1H
Q2501	5328793	TRANSISTOR DTC144K-26
Q2502	5328962	TRANSISTOR 2SA1037K
Q2503	5328962	TRANSISTOR 2SA1037K
Q2571	5328971	TRANSISTOR 2SC2412KBRST
Q2572	5328971	TRANSISTOR 2SC2412KBRST
Q2573	5328971	TRANSISTOR 2SC2412KBRST
Q2581	5327141	TRANSISTOR 2SD468C
Q2583	5327141	TRANSISTOR 2SD468C
Q2584	5327141	TRANSISTOR 2SD468C
Q2585	5327141	TRANSISTOR 2SD468C
Q2851	5328331	TRANSISTOR 2SB709AR
Q2852	5328971	TRANSISTOR 2SC2412KBRST
Q4511	5328962	TRANSISTOR 2SA1037K
Q4512	5328962	TRANSISTOR 2SA1037K
Q4551	5327091	TRANSISTOR 2SD1504E
⚠QF0851	5721941	IC PROTECTOR
⚠QF0871	5721946	IC PROTECTOR (N15)
⚠QF0872	5721941	IC PROTECTOR
⚠QF0873	5721944	IC PROTECTOR, ICP-N25
⚠QF0901	5721941	IC PROTECTOR
⚠QF2584	5721941	IC PROTECTOR
⚠QF2589	5721941	IC PROTECTOR
RM0701	1388911	LIGHT DETECTING UNITGP1U581X
ZD0871	5339268	DIODE HZS11B2
ZD0901	5339571	DIODE UTZ6.2B
ZD0903	5339462	ZENER DIODE HZS12A1
ZD0904	5339296	DIODE HZS5B2
ZD0905	5339489	ZENER DIODE HZS7A2
ZD1491	5339282	DIODE HZS6-B2
ZD2501	5339406	DIODE UTZJ30C
ZD2584	5339263	DIODE HZS7-A1
ZD2585	5339294	DIODE HZS11B1
		TRANSFORMERS
T0401	5230353	COIL, BIAS
⚠T0851	BT10161	TRANSFORMER, POWER
		COILS
L0201	5159153	CHOKE COIL 82UH
L0202	5159146	CHOKE COIL 27UH
L0203	5159143	CHOKE COIL 15UH
L0204	5121293	COIL
L0205	0770057	CHOKE COIL 100UH+-5%
L0206	5121291	COIL 33UH
L0207	5159156	CHOKE COIL 150UH
L0208	0770057	CHOKE COIL 100UH+-5%
L0214	5159149	CHOKE COIL 47UH
L0215	5159155	CHOKE COIL 120UH+-10%
L0216	5159155	CHOKE COIL 120UH+-10%
L0218	5159156	CHOKE COIL 150UH
L0301	0770053	CHOKE COIL 47UH+-5%
L0302	5159147	CHOKE COIL 33UH
L0401	0770057	CHOKE COIL 100UH+-5%
L0751	5121294	COIL 100UH
⚠L0851	5220242	COIL
⚠L0852	5220242	COIL
L0871	BH10111R	COIL 22UH
L0872	BH10114R	COIL 10UH
L0881	0770057	CHOKE COIL 100UH+-5%
L0901	5121294	COIL 100UH
L101	0773096	COIL, CHOKE 220UH(PV)
L1102	0770053	CHOKE COIL 47UH+-5%
L1402	5121288	COIL 15UH
L1441	5121294	COIL 100UH
L2501	0770057	CHOKE COIL 100UH+-5%
L2531	0770057	CHOKE COIL 100UH+-5%
L4551	0770057	CHOKE COIL 100UH+-5%
		CRYSTALS
X0301	5778871	CRYSTAL
X0901	5778274	CRYSTAL
X0902	BP10251	CRYSTAL
X1401	5778462	CRYSTAL
		MISCELLANEOUS
BL0751	5272378	LC FILTER
BL0752	5272378	LC FILTER
BL0851	5272379	COIL
BL0861	5272376	FILTER
BL0862	5272379	COIL
BL0863	5272379	COIL
BL0864	5272379	COIL
BL0865	5272379	COIL
BL0866	5272379	COIL
BL0901	5272376	FILTER
BL4581L	5272378	LC FILTER
BL4581R	5272378	LC FILTER
BL4582L	5272378	LC FILTER

SYMBOL-NO	P-NO	DESCRIPTION
BL4582R	5272378	LC FILTER
BL4583L	5272378	LC FILTER
BL4583R	5272378	LC FILTER
BL4584L	5272378	LC FILTER
BL4584R	5272378	LC FILTER
DG2701	DD10112	FLOURESCENT DISPLAY
⚠F0851	5723351	FUSE
⚠FH0851	5722411	HOLDER, FUSE
⚠FH0852	5722411	HOLDER, FUSE
JK0751	5674611	JACK
JK0752	5655073	JACK, 2P
⚠PC0851	CF10151G	TRANSISTOR PC120FY
S0701	5634884	SWITCH
S0702	5634884	SWITCH
S0703	5634884	SWITCH
S0704	5634884	SWITCH
S0705	5634884	SWITCH
S0706	5634884	SWITCH
S0707	5634884	SWITCH
S0708	5634884	SWITCH
S0709	5634884	SWITCH
S2101	5635631	SWITCH
S2102	5635331	SWITCH
S2104	5610891	SWITCH

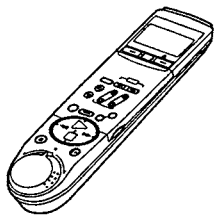
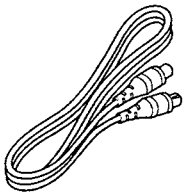
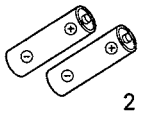
SYMBOL-NO	P-NO	DESCRIPTION

1. MECHANICAL PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		FOR FINAL ASSEMBLY
101	QA10291	COVER, TOP(HCPUK)
102	PH11571	PANEL, FRONT (HCPUK) (UKN)
102	PH11572	PANEL, FRONT(HCPUK) (NA, VPS)
103	QA10281	COVER, BOTTOM (HCPUK)
105	NA10251	BRACKET
106	NA10231	BRACKET
107	PH10591	PANEL, REAR(HCPUK)
110	4330711	LEG
⚠111	5852754	CORD, POWER (HCPUK) (UKN)
⚠111	5852854	CORD, POWER(HCPUK) (NA, VPS)
112	NT10251	FRAME(HCPUK)
113	NA10661	BRACKET
114	NA10241	BRACKET
115	MQ10193	HOLDER, RUBBER
116	MD10421	PLATE, SHIELD
118	1730392	TUNER IF UNIT(UKN)
118	1730402	TUNER IF UNIT(NA, VPS)
122	NA11031	BRACKET, FL(HCPUK)
123	MQ10195	HOLDER, RUBBER(HCPUK)
124	MD10541	PLATE, SHIELD (HCPUK) (VPS)
127	NA10691	BRACKET, PWB(HCPUK)
131	MQ10196	RUBBER(HCPUK)
202	6500761	MOTOR, LOADING
203	6441371	GEAR
204	6441392	GEAR
205	6406341	GEAR
206	6441381	GEAR
208	6823171	ARM, OPERATION
209	6441421	GEAR
210	6500332	PLATE
212	KF10271	GEAR, TAKE-UP
213	7788347	WASHER
214	6406291	GEAR(R)
215	6401445	ARM
216	6522979	SPRING
217	6500841	WASHER
218	6441433	GEAR, CHANGE
219	6522978	SPRING
220	6823183	ARM
221	6441411	GEAR
222	6823314	ARM
223	6416632	REEL, TABLE(S)
224	6404141	REEL, TABLE(T)
225	4583333	WASHER
226	4589851	ARM, BRAKE(R)
227	6823229	ARM, BRAKE(L)
228	6318613	SPRING
229	6823272	BRAKE
230	6823261	BRAKE
231	4588971	ARM
232	6823251	GEAR
233	6823292	BRAKE
234	6558453	SPRING
236	6638942	BASE, GUIDE ROLLER(I)
237	6358561	GUIDE ROLLER
238	6638955	BASE, GUIDE ROLLER(O)
239	6500507	GEAR LOADING(L)
240	6500463	GEAR, LOADING(R)
241	6823538	GEAR, MODE
242	KX10181	BRACKET
243	6823542	GEAR
244	6406332	PULLY, TAKE UP
245	6500841	WASHER
246	GP10123	MOTOR, CAPSTAN
247	6358101	BELT
248	6823424	ARM
249	6553361	SPRING
250	6823437	ARM, OPERATION
251	6553301	SPRING
252	6823474	BAND, TENSION
253	6823511	SHAFT
254	4825252	ARM, TENTION
255	6553352	SPRING
256	6638936	ARM
257	6823521	GEAR, CAM
258	6823445	BRACKET
259	6500431	ROLLER, PRESSURE
260	5434153	HEAD
261	4589841	BASE, HEAD
262	6554301	SPRING
263	6553151	SPRING
264	7785673	NUT
265	6638905	BASE, CYLINDER
267	5794062	BRUSH
268	5423081	HEAD, FULL ERASE
270	NA10561	BRACKET (HEPM)
271	6558502	SPRING
275	6816211	WORM
276	6358591	CAP
278	4587651	PIECE
402	6823613	BRACKET
403	6823621	GEAR
404	6823631	GEAR
405	6823642	ARM
406	6823653	ARM
407	6558531	SPRING
408	6500612	BRACKET
409	6500623	HOLDER
410	6823691	ARM
411	6558541	SPRING
413	6823663	ARM
414	6500672	BRACKET
415	6823701	HOLDER
501	5435721	CYLINDER, UPPER (CY-G6S1)
502	HX10173	CYLINDER, ASSY(CY-G6S3)
901	8679408	SCREW (3.0X8)
902	0671305	DT SCREW-2.6MMDX5MM
903	7781138	SCREW(3X10BT)
905	7781582	FALT SCREW-3MMDX10MM(BLACK)
906	7784323	SCREW(3X8)
907	8699412	SCREW (3X12) BLACK
908	8699414	SCREW(3X14)
951	0711304	SCREW(2.6X4)
952	0711312	PAN HEAD SCREW - 2.6MMD X 12MM
953	8691306	BT SCREW 2.6MM
954	0711306	PAN HEAD SCREW-2.6MMDX6MM
955	7773741	SCREW
956	4528181	SCREW
957	7775582	SCREW
958	0671308	DT SCREW-2.6MMDX8MM
959	8741408	SCREW (B3X8)
960	8650914	SCREW(2.6X14)
961	8741306	SCREW(2.6X6)
962	8741312	SPRING
965	MJ10251	SCREW(M2.6)
990	7784131	SCREW (3X8)

SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
		FOR ACCESSORIES			
802	HL10371	REMOTE HAND SET (VT-RM453E) (UKN)			
802	HL10372	REMOTE HAND SET (VT-RM454E) (NA, VPS)			
803	5858311	CONNECTION CORD			
804	PH11521	COVER, JACK			

Accessories supplied

802	803	804	
 Remote Control Handset	 Aerial cable for connecting this VCR and a TV	Dust preventive cover for EDIT IN/OUT, VIDEO IN and AUDIO IN sockets on the front of the VCR	 2 pcs. Battries for remote control handset (R6)

2. ELECTRICAL PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		CAPACITORS
C101	0893008	CERAMIC CHIP 0.1UF +-10% 16V(NA, VPS)
C102	0806037	ELECTROLYTIC 10UF 6.3V(NA, VPS)
C103	0893008	CERAMIC CHIP 0.1UF +-10% 16V(NA, VPS)
C104	0893058	CERAMIC CHIP 0.33UF+80-20% 16V(NA, VPS)
C105	0201066	CERAMIC CHIP 0.033UF+-10% 25V(NA, VPS)
C106	0201057	CERAMIC CHIP 0.0022UF+-10% 50V(NA, VPS)
C0201	0209904	CERAMIC DISC 560PF+-5% 50V
C0202	0209856	CERAMIC DISC 220PF+-5% 50V
C0203	0209891	CERAMIC CHIP 12PF+-5% 50V
C0204	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0205	0800039	ELECTROLYTIC 47UF 10V
C0206	0893082	CERAMIC CHIP 0.022UF
C0207	0209854	CERAMIC DISC 330PF+-5% 50V
C0208	0209899	CERAMIC DISC 120PF+-5% 50V
C0209	0209895	CERAMIC CHIP 39PF+-5% 50V
C0210	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0211	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0212	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0213	0893082	CERAMIC CHIP 0.022UF
C0214	0209897	CERAMIC CHIP 56PF+-5% 50V
C0215	0893082	CERAMIC CHIP 0.022UF
C0216	0800109	ELECTROLYTIC 1.0UF 50V
C0217	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0218	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0219	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0220	0893082	CERAMIC CHIP 0.022UF
C0221	0800122	ELECTROLYTIC 10UF 16V
C0222	0209852	CERAMIC CHIP 180PF+-5% 50V
C0223	0209846	CERAMIC CHIP 33PF+-5% 50V
C0224	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C0225	0217637	CAPACITOR 1.0UF+-20% 16V
C0226	0893082	CERAMIC CHIP 0.022UF
C0227	0207456	ELECTROLYTIC 1UF 50V
C0228	0209849	CERAMIC CHIP 390PF+-5% 50V
C0229	0209892	CERAMIC CHIP 18PF+-5% 50V
C0230	0893082	CERAMIC CHIP 0.022UF
C0231	0800122	ELECTROLYTIC 10UF 16V
C0232	0893082	CERAMIC CHIP 0.022UF
C0233	0893082	CERAMIC CHIP 0.022UF
C0234	0800122	ELECTROLYTIC 10UF 16V
C0235	0800351	ELECTROLYTIC 470UF 6.3V
C0236	0800122	ELECTROLYTIC 10UF 16V
C0237	0800103	ELECTROLYTIC 0.22UF 50V
C0238	0893082	CERAMIC CHIP 0.022UF
C0239	0893082	CERAMIC CHIP 0.022UF
C0240	0893082	CERAMIC CHIP 0.022UF
C0241	0217637	CAPACITOR 1.0UF+-20% 16V
C0242	0893082	CERAMIC CHIP 0.022UF
C0243	0893082	CERAMIC CHIP 0.022UF
C0244	0800109	ELECTROLYTIC 1.0UF 50V
C0245	0800109	ELECTROLYTIC 1.0UF 50V
C0246	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0247	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0248	0800109	ELECTROLYTIC 1.0UF 50V
C0249	0217637	CAPACITOR 1.0UF+-20% 16V
C0250	0893082	CERAMIC CHIP 0.022UF
C0253	0209894	CERAMIC CHIP 27PF+-10% 50V
C0254	0209892	CERAMIC CHIP 18PF+-5% 50V
C0255	0209875	CERAMIC CHIP 5PF+-10% 50V
C0256	0209880	CERAMIC CHIP 10PF+-0.5% 50V
C0257	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C0259	0893082	CERAMIC CHIP 0.022UF
C0260	0893082	CERAMIC CHIP 0.022UF
C0261	0209899	CERAMIC DISC 120PF+-5% 50V
C0262	0209847	CERAMIC CHIP 82PF+-10% 50V
C0263	0209846	CERAMIC CHIP 33PF+-5% 50V
C0265	0893082	CERAMIC CHIP 0.022UF
C0266	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0267	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0268	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0270	0209894	CERAMIC CHIP 27PF+-10% 50V
C0271	0209847	CERAMIC CHIP 82PF+-10% 50V
C0273	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0274	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0275	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0276	0209846	CERAMIC CHIP 33PF+-5% 50V
C0301	0800109	ELECTROLYTIC 1.0UF 50V
C0302	0893086	CERAMIC CHIP 0.1UF+80-20% 50V
C0303	0800351	ELECTROLYTIC 470UF 6.3V
C0304	0893084	CERAMIC CHIP 0.047UF+80-20% 50V
C0305	0800109	ELECTROLYTIC 1.0UF 50V
C0307	0893082	CERAMIC CHIP 0.022UF
C0308	0209895	CERAMIC CHIP 39PF+-5% 50V
C0309	0893035	CERAMIC CHIP 2200PF+-10% 50V
C0310	0893079	CERAMIC DISC 0.01UF+80-20% 50V
C0381	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0383	0209895	CERAMIC CHIP 39PF+-5% 50V
C0401	0800135	ELECTROLYTIC 33UF 16V
C0402	0893037	CERAMIC CHIP 3300PF+-10% 50V
C0403	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0404	0204278	MYLAR 0.018UF+-5% 100V
C0405	0209856	CERAMIC DISC 220PF+-5% 50V
C0406	0893035	CERAMIC CHIP 2200PF+-10% 50V
C0407	0893031	CERAMIC CHIP 1000PF+-10% 50V
C0408	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0409	0800118	ELECTROLYTIC 4.7UF 35V
C0410	0800118	ELECTROLYTIC 4.7UF 35V
C0411	0800122	ELECTROLYTIC 10UF 16V
C0412	0893046	CERAMIC CHIP 0.015UF+-10% 50V
C0413	0800127	ELECTROLYTIC 220UF 10V
C0414	0800122	ELECTROLYTIC 10UF 16V
C0415	0800122	ELECTROLYTIC 10UF 16V
C0416	0800122	ELECTROLYTIC 10UF 16V
C0417	0800139	ELECTROLYITC 47UF 10V
C0418	0893018	CERAMIC CHIP 0.022UF+-10% 25V
C0419	0893018	CERAMIC CHIP 0.022UF+-10% 25V
C0421	0209904	CERAMIC DISC 560PF+-5% 50V
C0431	0800032	ELECTROLYTIC 33UF 16V
C0432	0893037	CERAMIC CHIP 3300PF+-10% 50V
C0433	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0434	0204332	POLYESTER FILM 0.033UF+-5% 100V
C0440	0800122	ELECTROLYTIC 10UF 16V
C0441	0800122	ELECTROLYTIC 10UF 16V
C0505	0800122	ELECTROLYTIC 10UF 16V
C0506L	0800118	ELECTROLYTIC 4.7UF 35V
C0506R	0800118	ELECTROLYTIC 4.7UF 35V
C0507L	0800118	ELECTROLYTIC 4.7UF 35V
C0507R	0800118	ELECTROLYTIC 4.7UF 35V
C0508L	0800118	ELECTROLYTIC 4.7UF 35V
C0508R	0800118	ELECTROLYTIC 4.7UF 35V
C0509L	0800118	ELECTROLYTIC 4.7UF 35V
C0509R	0800118	ELECTROLYTIC 4.7UF 35V
C0510L	0893023	CERAMIC CHIP 0.047UF+-10% 25V
C0510R	0893023	CERAMIC CHIP 0.047UF+-10% 25V
C0511L	0800032	ELECTROLYTIC 33UF 16V
C0511R	0800032	ELECTROLYTIC 33UF 16V
C0512L	0800112	ELECTROLYTIC 2.2UF 50V

SYMBOL-NO	P-NO	DESCRIPTION
C0512R	0800112	ELECTROLYTIC 2.2UF 50V
C0513L	0800039	ELECTROLYTIC 47UF 10V
C0513R	0800039	ELECTROLYTIC 47UF 10V
C0514L	0893046	CERAMIC CHIP 0.015UF+-10% 50V
C0514R	0893046	CERAMIC CHIP 0.015UF+-10% 50V
C0515L	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0515R	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0516L	0893031	CERAMIC CHIP 1000PF+-10% 50V
C0516R	0893031	CERAMIC CHIP 1000PF+-10% 50V
C0517	0800048	ELECTROLYTIC 100UF 10V
C0518	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0519	0800023	ELECTROLYITC 22UF 16V
C0520	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0521	0800144	ELECTROLYTIC 100UF 10V
C0522	0209900	CERAMIC CHIP 270PF+-5% 50V
C0523	0893013	CERAMIC CHIP 0.22UF+-10% 16V
C0524	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0526	0890101	CERAMIC DISC 0.01UF+-20% 16V
C0527	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C0530L	0800122	ELECTROLYTIC 10UF 16V
C0530R	0800122	ELECTROLYTIC 10UF 16V
C0601	0207444	ELECTROLYTIC 1.0UF 50V
C0602	0893002	CERAMIC CHIP 0.033UF+-10% 16V
C0603	0893059	CERAMIC CHIP 0.47UF+80-20% 16V
C0604	0800179	ELECTROLYTIC 10UF 16V
C0605	0800179	ELECTROLYTIC 10UF 16V
C0606	0893074	CERAMIC CHIP 1500PF+80-20% 50V
C0607	0893058	CERAMIC CHIP 0.33UF+80-20% 16V
C0608	0893073	CERAMIC CHIP 1000PF+80-20% 50V
C0609	0800183	ELECTROLYTIC 33UF 10V
C0610	0800179	ELECTROLYTIC 10UF 16V
C0611	0209934	CERAMIC CHIP 22PF+-5% 50V
C0612	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0613	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0614	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0615	0893088	CERAMIC CHIP 0.015UF+-10% 16V
C0616	0800176	ELECTROLYTIC 2.2UF 50V
C0617	0893006	CERAMIC CHIP 0.068UF+-10% 16V
C0618	0800183	ELECTROLYTIC 33UF 10V
C0619	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0620	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0625	0890039	CERAMIC DISC 4700PF+-20% 16V
C0626	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0627	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0628	0800145	ELECTROLYTIC 100UF 16V
C0651	0800179	ELECTROLYTIC 10UF 16V
C0652	0800179	ELECTROLYTIC 10UF 16V
C0653	0800182	ELECTROLYTIC 22UF 16V
C0654	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0655	0209854	CERAMIC DISC 330PF+-5% 50V
C0656	0209899	CERAMIC DISC 120PF+-5% 50V
C0657	0209906	CERAMIC DISC 820PF+-5% 50V
C0751	0890035	CERAMIC DISC 1000PF+-10% 50V
C0752	0890035	CERAMIC DISC 1000PF+-10% 50V
C0753	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C0761	0800039	ELECTROLYTIC 47UF 10V
⚠C0851	AN10201S	FILM CAPACITOR 0.1UF+-20% 250V
⚠C0852	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0853	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0854	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0855	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0856	0235992	CERAMIC DISC 2200PF 250V
⚠C0857	0235992	CERAMIC DISC 2200PF 250V
⚠C0858	0235992	CERAMIC DISC 2200PF 250V
C0859	0254241	ELECTROLYTIC 82UF 400V
C0860	0204284	ELECTROLYTIC 0.047UF 250V
C0861	1143004	CERAMIC CHIP 150PF+-5% 1KV
C0863	0890022	CERAMIC DISC 100PF+-10% 50V
C0864	0890035	CERAMIC DISC 1000PF+-10% 50V
C0865	0254384	ELECTROLYTIC 47UF 63V
C0866	0800324	ELECTROLYTIC 100UF 6.3V
⚠C0867	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0868	0235994	CERAMIC CAPACITOR 470PF+-10% 250V
⚠C0869	AN10201S	FILM CAPACITOR 0.1UF+-20% 250V
C0871	0254384	ELECTROLYTIC 47UF 63V
C0872	0254324	ELECTROLYTIC 1000UF 35V
C0873	0254396	ELECTROLYTIC 470UF 25V
C0874	0254384	ELECTROLYTIC 47UF 63V
C0875	0254395	ELECTROLYTIC 220UF 10V
C0876	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0877	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C0878	0254325	ELECTROLYTIC 2200UF 16V
C0879	0254397	ELECTROLYTIC 820UF 16V
C0880	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0881	0800286	CAPASITOR 4.7UF+-20% 25V
C0883	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C0884	AJ10131R	CERAMIC CAPACITOR 470PF+-10% 500V
C0885	1143002	CERAMIC DISC 100PF 500V
C0887	1143002	CERAMIC DISC 100PF 500V
C0901	0800117	ELECTROLYTIC 4.7UF 25V
C0902	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C0903	0800138	ELECTROLYTIC 47UF 6.3V
C0904	0217516	CAPACITOR 0.047UF+80-20% 5.5V
C0905	0800112	ELECTROLYTIC 2.2UF 50V
C0906	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0908	0209934	CERAMIC CHIP 22PF+-5% 50V
C0909	0209934	CERAMIC CHIP 22PF+-5% 50V
C0912	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0914	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0915	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0916	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0917	0890043	CERAMIC DISC 0.01UF+-20% 16V
C0918	0800135	ELECTROLYTIC 33UF 16V
C0919	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0920	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0922	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0923	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0926	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0927	0800123	ELECTROLYTIC 10UF 25V
C0928	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0930	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0931	0893027	CERAMIC CHIP 0.1UF+-10% 25V
C0932	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0933	0893048	CERAMIC CHIP 0.022UF+-10% 50V
C0934	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C1101	0800175	ELECTROLYTIC 1.0UF 50V
C1102	0209849	CERAMIC CHIP 390PF+-5% 50V
C1103	0209893	CERAMIC CHIP 22PF+-10% 50V
C1104	0209893	CERAMIC CHIP 22PF+-10% 50V
C1105	0209849	CERAMIC CHIP 390PF+-5% 50V
C1106	0800175	ELECTROLYTIC 1.0UF 50V
C1107	0209898	CERAMIC CHIP 100PF+-5% 50V
C1108	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1110	0800185	ELECTROLYTIC 47UF 6.3V
C1111	0893018	CERAMIC CHIP 0.022UF+-10% 25V
C1112	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1113	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1114	0800173	ELECTROLYTIC 0.33UF 50V
C1121	0893014	CERAMIC CHIP 0.01UF+-10% 25V
C1122	0893014	CERAMIC CHIP 0.01UF+-10% 25V

SYMBOL-NO	P-NO	DESCRIPTION	
C1123	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1124	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1125	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1126	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1127	0893035	CERAMIC CHIP 2200PF+-10% 50V	
C1128	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1129	0893035	CERAMIC CHIP 2200PF+-10% 50V	
C1130	0893018	CERAMIC CHIP 0.022UF+-10% 25V	
C1131	0800185	ELECTROLYTIC 47UF 6.3V	
C1132	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1133	0209880	CERAMIC CHIP 10PF+-0.5% 50V	
C1136	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1138	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1139	0893023	CERAMIC CHIP 0.047UF+-10% 25V	
C1151	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1152	0209898	CERAMIC CHIP 100PF+-5% 50V	
C1153	0209898	CERAMIC CHIP 100PF+-5% 50V	
C1154	0893014	CERAMIC CHIP 0.01UF+-10% 25V	
C1401	0217637	CAPACITOR 1.0UF+-20% 16V	
C1402	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C1403	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C1404	0800279	CAPACITOR 1.0UF+-20% 50V	
C1405	0800175	ELECTROLYTIC 1.0UF 50V	
C1407	0207404	ELECTROLYTIC 4.7UF 35V	
C1408	0209928	CERAMIC DISC 8PF+-5% 50V	
C1409	0209928	CERAMIC DISC 8PF+-5% 50V	
C1411	0209936	CERAMIC CHIP 33PF+-5% 50V	
C1412	0209934	CERAMIC CHIP 22PF+-5% 50V	
C1441	0800047	ELECTROLYTIC 100UF 6.3V	
C1442	0209898	CERAMIC CHIP 100PF+-5% 50V	
C1443	0880005	POLYESTER FILM 2200PF+-10% 50V	
C1444	0800175	ELECTROLYTIC 1.0UF 50V	
C1451	0209950	CERAMIC CHIP 470PF+-5% 50V	
C1452	0800179	ELECTROLYTIC 10UF 16V	
C1481	0217637	CAPACITOR 1.0UF+-20% 16V	
C1484	0209846	CERAMIC CHIP 33PF+-5% 50V	
C1485	0209896	CERAMIC CHIP 47PF+-5% 50V	
C1486	0207455	ELECTROLYTIC 33UF 16V	
C1488	0217637	CAPACITOR 1.0UF+-20% 16V	
C1491	0800178	ELECTROLYTIC 4.7UF 35V	
C1492	0893053	CERAMIC CHIP 0.047UF+-10% 50V	
C1801	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1802	0890019	CERAMIC DISC 68PF+-50% 50V	(NA, UKN)
C1803	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1804	0800039	ELECTROLYTIC 47UF 10V	(NA, UKN)
C1805	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1806	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1807	0890019	CERAMIC DISC 68PF+-50% 50V	(NA, UKN)
C1808	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1810	0890045	CERAMIC DISC 0.047UF+80-20% 50V	(NA, UKN)
C1811	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1812	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1813	0800039	ELECTROLYTIC 47UF 10V	(NA, UKN)
C1814	0890008	CERAMIC DISC 10PF+-5% 50V	(NA, UKN)
C1815	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1816	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1817	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1818	0890026	CERAMIC DISC 220PF+-10% 50V	(NA, UKN)
C1819	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1820	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1821	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1822	0800003	ELECTROLYTIC 1UF 50V	(NA, UKN)
C1823	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1824	0800039	ELECTROLYTIC 47UF 10V	(NA, UKN)
C1825	0890044	CERAMIC DISC 0.022UF+80-20% 25V	(NA, UKN)
C1826	0880019	POLYESTER FILM 0.33UF+-10% 50V	(NA, UKN)
C1828	0890021	CERAMIC DISC 82PF+-10% 50V	(NA, UKN)
C1829	0890021	CERAMIC DISC 82PF+-10% 50V	(NA, UKN)
C1830	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1833	0800001	ELECTROLYTIC 0.47UF 50V	(NA, UKN)
C1834	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1835	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1836	0800039	ELECTROLYTIC 47UF 10V	(NA, UKN)
C1837L	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1837R	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1838L	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1838R	0800015	ELECTROLYTIC 10UF 16V	(NA, UKN)
C1839L	0890038	CERAMIC DISC 3300PF+-20% 16V	(NA, UKN)
C1839R	0890038	CERAMIC DISC 3300PF+-20% 16V	(NA, UKN)
C1841	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1842	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, UKN)
C1851	0800005	ELECTROLYTIC 2.2UF 50V	(NA, VPS)
C1852	0800005	ELECTROLYTIC 2.2UF 50V	(NA, VPS)
C1853	0800005	ELECTROLYTIC 2.2UF 50V	(VPS)
C1854	0890043	CERAMIC DISC 0.01UF+-20% 16V	(NA, VPS)
C1856	0890043	CERAMIC DISC 0.01UF+-20% 16V	(NA, VPS)
C1857	0800039	ELECTROLYTIC 47UF 10V	(NA, VPS)
C1858	0890043	CERAMIC DISC 0.01UF+-20% 16V	(NA, VPS)
C1859	0800005	ELECTROLYTIC 2.2UF 50V	(NA, VPS)
C1860	0800005	ELECTROLYTIC 2.2UF 50V	(NA, VPS)
C1861	0800005	ELECTROLYTIC 2.2UF 50V	(NA, VPS)
C1862	0800009	ELECTROLYTIC 4.7UF 25V	(NA, VPS)
C1863	0800009	ELECTROLYTIC 4.7UF 25V	(NA, VPS)
C1864	0800015	ELECTROLYTIC 10UF 16V	(NA, VPS)
C1865	0800015	ELECTROLYTIC 10UF 16V	(NA, VPS)
C1866	0800015	ELECTROLYTIC 10UF 16V	(NA)
C1867	0800015	ELECTROLYTIC 10UF 16V	(NA)
C1881	0890029	CERAMIC DISC 390PF+-10% 50V	(NA, UKN)
C1882	0890045	CERAMIC DISC 0.047UF+80-20% 50V	(NA, UKN)
C1890	0890043	CERAMIC DISC 0.01UF+-20% 16V	(NA, VPS)
C1891	0890043	CERAMIC DISC 0.01UF+-20% 16V	(NA, VPS)
C1894	0800005	ELECTROLYTIC 2.2UF 50V	(VPS)
C1895	0890025	CERAMIC DISC 180PF+-10% 50V	(NA, VPS)
C1896	0800048	ELECTROLYTIC 100UF 10V	(NA, VPS)
C1897	0890036	CERAMIC DISC 1500PF+-20% 16V	(NA, VPS)
C1898	0800015	ELECTROLYTIC 10UF 16V	(NA, VPS)
C1899	0890046	CERAMIC DISC 0.1UF+80-20% 50V	(NA, VPS)
C2101	0890045	CERAMIC DISC 0.047UF+80-20% 50V	
C2502	0209846	CERAMIC CHIP 33PF+-5% 50V	
C2503	0217637	CAPACITOR 1.0UF+-20% 16V	
C2504	0800044	ELECTROLYTIC 47UF 50V	
C2505	0893053	CERAMIC CHIP 0.047UF+-10% 50V	
C2506	0217637	CAPACITOR 1.0UF+-20% 16V	
C2507	0800041	ELECTROLYTIC 47UF 16V	
C2510	0800186	ELECTROLYTIC 47UF 16V	
C2511	0800173	ELECTROLYTIC 0.33UF 50V	
C2512	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C2514	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C2515	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C2516	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C2517L	0800179	ELECTROLYTIC 10UF 16V	
C2517R	0800179	ELECTROLYTIC 10UF 16V	
C2518	0800179	ELECTROLYTIC 10UF 16V	
C2519	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C2520	0893053	CERAMIC CHIP 0.047UF+-10% 50V	
C2521	0893048	CERAMIC CHIP 0.022UF+-10% 50V	
C2522	0207446	ELECTROLYTIC 10UF+-20% 16V	
C2523	0207446	ELECTROLYTIC 10UF+-20% 16V	
C2524	0207446	ELECTROLYTIC 10UF+-20% 16V	
C2525	0207446	ELECTROLYTIC 10UF+-20% 16V	

SYMBOL-NO	P-NO	DESCRIPTION
C2526	0893073	CERAMIC CHIP 1000PF+80-20% 50V
C2541L	0207446	ELECTROLYTIC 10UF+-20% 16V
C2541R	0207446	ELECTROLYTIC 10UF+-20% 16V
C2542L	0800176	ELECTROLYTIC 2.2UF 50V
C2542R	0800176	ELECTROLYTIC 2.2UF 50V
C2543L	0800175	ELECTROLYTIC 1.0UF 50V
C2543R	0800175	ELECTROLYTIC 1.0UF 50V
C2544	0800185	ELECTROLYTIC 47UF 6.3V
C2545	0800179	ELECTROLYTIC 10UF 16V
C2571	0207446	ELECTROLYTIC 10UF+-20% 16V
C2572	0800179	ELECTROLYTIC 10UF 16V
C2573	0800179	ELECTROLYTIC 10UF 16V
C2575	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2576	0209897	CERAMIC CHIP 56PF+-5% 50V
C2577	0209897	CERAMIC CHIP 56PF+-5% 50V
C2578	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C2584	0800178	ELECTROLYTIC 4.7UF 35V
C2585	0800178	ELECTROLYTIC 4.7UF 35V
C2586	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C2592	0800182	ELECTROLYTIC 22UF 16V
C2593	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C2851	0800174	ELECTROLYTIC 0.47UF 50V
C2852	0800174	ELECTROLYTIC 0.47UF 50V
C4511	0255138	ELECTROLYTIC 470UF 6.3V
C4512	0800144	ELECTROLYTIC 100UF 10V
C4513	0800109	ELECTROLYTIC 1.0UF 50V
C4514	0800109	ELECTROLYTIC 1.0UF 50V
C4516	0217637	CAPACITOR 1.0UF+-20% 16V
C4517	0800109	ELECTROLYTIC 1.0UF 50V
C4518	0800109	ELECTROLYTIC 1.0UF 50V
C4519	0217637	CAPACITOR 1.0UF+-20% 16V
C4520	0255138	ELECTROLYTIC 470UF 6.3V
C4541L	0800122	ELECTROLYTIC 10UF 16V
C4541R	0800122	ELECTROLYTIC 10UF 16V
C4542L	0800122	ELECTROLYTIC 10UF 16V
C4542R	0800122	ELECTROLYTIC 10UF 16V
C4551L	0800122	ELECTROLYTIC 10UF 16V
C4551R	0800122	ELECTROLYTIC 10UF 16V
C4552L	0800122	ELECTROLYTIC 10UF 16V
C4552R	0800122	ELECTROLYTIC 10UF 16V
C4553L	0800122	ELECTROLYTIC 10UF 16V
C4553R	0800122	ELECTROLYTIC 10UF 16V
C4554L	0800122	ELECTROLYTIC 10UF 16V
C4554R	0800122	ELECTROLYTIC 10UF 16V
C4555L	0800122	ELECTROLYTIC 10UF 16V
C4555R	0800122	ELECTROLYTIC 10UF 16V
C4556L	0800122	ELECTROLYTIC 10UF 16V
C4556R	0800122	ELECTROLYTIC 10UF 16V
C4557	0800145	ELECTROLYTIC 100UF 16V
C4558	0893004	CERAMIC CHIP 0.047UF+-10% 16V
C4559	0800145	ELECTROLYTIC 100UF 16V
C4571L	0800122	ELECTROLYTIC 10UF 16V
C4571R	0800122	ELECTROLYTIC 10UF 16V
C4581L	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4581R	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4582L	0209856	CERAMIC DISC 220PF+-5% 50V
C4582R	0209856	CERAMIC DISC 220PF+-5% 50V
C4583L	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4583R	0893031	CERAMIC CHIP 1000PF+-10% 50V
C4584L	0209856	CERAMIC DISC 220PF+-5% 50V
C4584R	0209856	CERAMIC DISC 220PF+-5% 50V
C4585L	0893042	CERAMIC CHIP 6800PF+-10% 50V
C4585R	0893042	CERAMIC CHIP 6800PF+-10% 50V

RESISTORS

SYMBOL-NO	P-NO	DESCRIPTION
R101	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W (NA, VPS)
R102	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W (NA, VPS)
R103	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W(NA, VPS)
R104	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W (NA, VPS)
R106	0104005	METAL FILM 1.2MOHM+-5% 0.1W (NA, VPS)
R108	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W(NA, VPS)
R109	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W(NA, VPS)
R110	0104005	METAL FILM 1.2MOHM+-5% 0.1W (NA, VPS)
R0201	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0203	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W
R0204	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R0205	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0206	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
R0207	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R0208	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0209	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R0210	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R0211	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0212	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0213	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0214	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0215	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0216	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R0217	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R0218	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0219	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0221	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0222	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0223	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R0224	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0227	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R0228	0103891	CHIP RESISTOR 1.6KOHM+-5% 1/8W
R0229	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0230	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R0231	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0232	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0233	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0234	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R0236	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0239	0103870	CHIP RESISTOR 180KOHM+-5% 0.1W
R0242	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0243	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0244	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0245	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0246	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0247	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0248	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0249	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0250	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0251	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0252	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0256	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0260	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0261	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R0270	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0271	0103832	CHIP RESISTOR 120OHM+-5% 0.1W
R0272	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0273	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0274	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0279	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0280	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R0281	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
R0302	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R0303	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R0304	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0306	0103838	RESISTOR CHIP 390OHM+-5% 0.1W
R0307	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R0381	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0401	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0402	0103819	CHIP RESISTOR 10 OHM+-5% 0.1W
R0403	0104119	CHIP RESISTOR 18KOHM+-1% 1/10W
R0404	0103819	CHIP RESISTOR 10 OHM+-5% 0.1W
R0405	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0406	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0408	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R0409	0103834	CHIP RESISTOR 180OHM+-5% 0.1W
R0410	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R0411	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
R0412	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
R0413	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
R0414	0104253	CHIP RESISTOR 510KOHM+-5% 1/10W
R0418	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0419	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0420	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0421	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0424	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
R0426	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0427	0103836	CHIP RESISTOR 270 OHM+-5% 0.1W
R0429	0103876	CHIP RESISTOR 560KOHM+-5% 0.1W
R0431	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0432	0103812	CHIP RESISTOR 2.70HM+-10% 0.1W
R0442	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0443	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0444	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0445	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0446	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0447	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0450	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0451	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0504L	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0504R	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R0505L	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0505R	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0506L	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0506R	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0507L	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0507R	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0508L	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0508R	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0509L	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0509R	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0510	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0511	0104123	CHIP RESISTOR 8.2KOHM+-1% 1/10W
R0512L	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0512R	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0513L	0104252	CHIP RESISTOR 510 OHM+-5% 1/10W
R0513R	0104252	CHIP RESISTOR 510 OHM+-5% 1/10W
R0515L	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W
R0515R	0103856	CHIP RESISTOR 12KOHM+-5% 0.1W
R0516L	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R0516R	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R0517L	0104271	CHIP RESISTOR 15KOHM+-1% 1/10W
R0517R	0104124	CHIP RESISTOR 12KOHM+-1% 1/10W
R0518L	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0518R	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R0519	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R0520	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0522	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0523	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R0529L	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0529R	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0530	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R0530L	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0530R	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0531	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R0601	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0602	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0603	0103872	CHIP RESISTOR 270KOHM+-5% 0.1W
R0604	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0605	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0606	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0607	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0608	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0609	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0610	0103868	CHIP RESISTOR 120KOHM+-5% 0.1W
R0611	0103865	CHIP RESISTOR 68KOHM+-5% 0.1W
R0612	0103858	CHIP RESISTOR 18KOHM+-5% 0.1W
R0613	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0614	0103865	CHIP RESISTOR 68KOHM+-5% 0.1W
R0615	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0616	0700037	CARBON FILM 560OHM+-5% 1/8W
R0617	0700037	CARBON FILM 560OHM+-5% 1/8W
R0618	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0619	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R0620	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0621	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0622	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0623	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R0624	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
R0625	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0626	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0628	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0629	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0630	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0631	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0632	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0633	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0651	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0652	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0653	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0654	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0655	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0656	0103878	CHIP RESISTOR 820KOHM+-5% 0.1W
R0657	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0658	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0701	0700044	CARBON FILM 1.8KOHM+-5% 1/8W
R0703	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0704	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0705	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0706	0700042	CARBON FILM 1.2KOHM+-5% 1/8W
R0708	0700043	CARBON FILM 1.5KOHM+-5% 1/8W
R0709	0700029	CARBON FILM 150 OHM+-5% 1/8W
R0710	0700044	CARBON FILM 1.8KOHM+-5% 1/8W
R0711	0700051	CARBON FILM 5.6KOHM+-5% 1/8W
R0712	0700033	CARBON FILM 270OHM+-5% 1/8W
R0714	0700062	CARBON FILM 39KOHM+-5% 1/8W
⚠R0852	AT10211M	CHIP RESISTOR 1MOHM 1/2W
R0854	0116671	RESISTOR 100KOHM+-5% 3w
R0855	0116672	RESISTOR 0.68 OHM+-5% 3W
R0856	0113525	CARBON FILM 220KOHM+-5% 1/2W
R0857	0113525	CARBON FILM 220KOHM+-5% 1/2W
R0858	0101868	CARBON FILM 4.7MOHM+-5% 1/4W
R0859	0101868	CARBON FILM 4.7MOHM+-5% 1/4W
R0862	0700034	CARBON FILM 330OHM+-5% 1/8W

SYMBOL-NO	P-NO	DESCRIPTION
R0863	0116671	RESISTOR 100KOHM+-5% 3w
R0864	0101818	CARBON FILM 560HM+-5%1/4W
R0865	0101812	RESISTOR 18 OHM+-5% 1/4W
R0866	0700043	CARBON FILM 1.5KOHM+-5% 1/8W
R0867	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0868	0700072	CARBON FILM 220KOHM+-5% 1/8W
R0881	0700013	CHIP RESISTOR 8.2 OHM+-5% 1/8W
R0882	0700012	CARBON FILM 6.8 OHM+-5% 1/8W
R0888	0101841	CARBON FILM 4.7KOHM+-5% 1/4W
R0889	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W
R0890	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R0891	0105124	CHIP RESISTOR 4700 OHM+-1% 1/10W
R0892	0104268	CHIP RESISTOR 3KOHM+-1% 0.1W
R0893	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0894	0700046	CARBON FILM 2.7KOHM+-5% 1/8W
R0895	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R0896	0104279	CHIP RESISTOR 100 OHM+-1% 1/10W
R0901	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0902	0700027	CARBON FILM 100 OHM+-5% 1/8W
R0903	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0904	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0905	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0906	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0907	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0908	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0909	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0910	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0911	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0912	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0913	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0914	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0915	0104111	CHIP RESISTOR 10KOHM+-1% 1/10W
R0917	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0918	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0919	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0920	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0921	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0922	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0923	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R0924	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R0925	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0926	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0927	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0928	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R0929	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0930	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0931	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0932	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0933	0700039	CARBON FILM 8200HM+-5% 1/8W
R0934	0700039	CARBON FILM 8200HM+-5% 1/8W
R0935	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0936	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0937	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0938	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0939	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0940	0700043	CARBON FILM 1.5KOHM+-5% 1/8W
R0941	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0942	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0943	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0945	0105515	CHIP RESISTOR 4.7MOHM+-5% 1/10W
R0946	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R0947	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R0948	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R0949	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0950	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0951	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0952	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0953	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0954	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0955	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R0956	0700031	CARBON FILM 1800HM+-5% 1/8W
R0957	0700033	CARBON FILM 2700HM+-5% 1/8W
R0958	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0959	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0960	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0961	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0965	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0972	0700066	CARBON FILM 82KOHM+-5% 1/8W
R0973	0700066	CARBON FILM 82KOHM+-5% 1/8W
R0974	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0975	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0976	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R0977	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0978	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R0982	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0983	0700037	CARBON FILM 5600HM+-5% 1/8W
R0984	0700036	CARBON FILM 470 OHM+-5% 1/8W
R0985	0700037	CARBON FILM 5600HM+-5% 1/8W
R0986	0700037	CARBON FILM 5600HM+-5% 1/8W
R0987	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0988	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0989	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1101	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1102	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1103	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1104	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1105	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1106	0103819	CHIP RESISTOR 10 OHM+-5% 0.1W
R1107	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R1108	0103866	CHIP RESISTOR 82KOHM+-5% 0.1W
R1109	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R1110	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R1111	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1113	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R1115	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R1121	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R1122	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R1123	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R1124	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R1129	0103842	CHIP RESISTOR 820 OHM+-5% 0.1W
R1150	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R1151	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R1402	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R1403	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R1404	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R1413	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R1414	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R1415	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
R1416	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R1417	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R1441	0105142	CHIP RESISTOR 16.2KOHM+-1% 1/10W
R1442	0104278	CARBON FILM 120KOHM+-1% 1/10W
R1443	0103875	CHIP RESISTOR 470KOHM+-5% 0.1W
R1444	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R1451	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R1452	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R1454	0700034	CARBON FILM 3300HM+-5% 1/8W
R1455	0103876	CHIP RESISTOR 560KOHM+-5% 0.1W
R1456	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R1485	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R1486	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R1487	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
R1489	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R1491	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R1492	0700027	CARBON FILM 100 OHM+-5% 1/8W
R1500	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
R1502	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
R1801	0700054	CARBON FILM 10KOHM+-5% 1/8W (NA, UKN)
R1802	0700081	CARBON FILM 1.0MOHM+-5% 1/8W(NA, UKN)
R1803	0700054	CARBON FILM 10KOHM+-5% 1/8W (NA, UKN)
R1804	0700081	CARBON FILM 1.0MOHM+-5% 1/8W(NA, UKN)
R1805	0700044	CARBON FILM 1.8KOHM+-5% 1/8W(NA, UKN)
R1807	0700061	CARBON FILM 33KOHM+-5% 1/8W (NA, UKN)
R1808	0700041	CARBON FILM 1.0KOHM+-5% 1/8W(NA, UKN)
R1809	0700027	CARBON FILM 100 OHM+-5% 1/8W(NA, UKN)
R1811	0700054	CARBON FILM 10KOHM+-5% 1/8W (NA, UKN)
R1812	0700058	CARBON FILM 22KOHM+-5% 1/8W (NA, UKN)
R1813	0700081	CARBON FILM 1.0MOHM+-5% 1/8W(NA, UKN)
R1815	0700078	CARBON FILM 680KOHM+-5% 1/8W(NA, UKN)
R1830L	0700067	CARBON FILM 100KOHM+-5% 1/8W(NA, UKN)
R1830R	0700067	CARBON FILM 100KOHM+-5% 1/8W(NA, UKN)
R1831L	0700068	CARBON FILM 120KOHM+-5% 1/8W(NA, UKN)
R1831R	0700068	CARBON FILM 120KOHM+-5% 1/8W(NA, UKN)
R1832L	0700061	CARBON FILM 33KOHM+-5% 1/8W (NA, UKN)
R1832R	0700061	CARBON FILM 33KOHM+-5% 1/8W (NA, UKN)
R1833L	0700062	CARBON FILM 39KOHM+-5% 1/8W (NA, UKN)
R1833R	0700062	CARBON FILM 39KOHM+-5% 1/8W (NA, UKN)
R1834L	0700028	CARBON FILM 1200HM+-5% 1/8W (NA, UKN)
R1834R	0700028	CARBON FILM 1200HM+-5% 1/8W (NA, UKN)
R1851	0700037	CARBON FILM 5600HM+-5% 1/8W (NA, VPS)
R1852	0700031	CARBON FILM 1800HM+-5% 1/8W (NA, VPS)
R1853	0700049	CARBON FILM 4.7KOHM+-5% 1/8W(NA, VPS)
R1854	0700037	CARBON FILM 5600HM+-5% 1/8W (NA, VPS)
R1855	0700028	CARBON FILM 1200HM+-5% 1/8W (NA, VPS)
R1856	0700028	CARBON FILM 1200HM+-5% 1/8W (NA, VPS)
R1857	0700049	CARBON FILM 4.7KOHM+-5% 1/8W(NA, VPS)
R1858	0700059	CARBON FILM 27KOHM+-5% 1/8W (NA, VPS)
R1860	0700043	CARBON FILM 1.5KOHM+-5% 1/8W(NA)
R1861	0700045	CARBON FILM 2.2KOHM+-5% 1/8W(NA)
R1862	0700043	CARBON FILM 1.5KOHM+-5% 1/8W(NA)
R1863	0700045	CARBON FILM 2.2KOHM+-5% 1/8W(NA)
R1864	0700034	CARBON FILM 3300HM+-5% 1/8W (NA, VPS)
R1865	0700034	CARBON FILM 3300HM+-5% 1/8W (NA, VPS)
R1870	0700038	CARBON FILM 6800HM+-5% 1/8W (NA, VPS)
R1899	0700059	CARBON FILM 27KOHM+-5% 1/8W (NA, VPS)
R2501	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2502	0101841	CARBON FILM 4.7KOHM+-5% 1/4W
R2503	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R2504	0103874	CHIP RESISTOR 390KOHM+-5% 0.1W
R2505	0103874	CHIP RESISTOR 390KOHM+-5% 0.1W
R2506	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2508	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R2509	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2510L	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R2510R	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R2511L	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2511R	0700063	CARBON FILM 47KOHM+-5% 1/8W
R2513	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
R2514	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R2515	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2516	0700054	CARBON FILM 10KOHM+-5% 1/8W
R2517	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2518	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2519	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R2520	0103865	CHIP RESISTOR 68KOHM+-5% 0.1W
R2521	0103832	CHIP RESISTOR 120OHM+-5% 0.1W
R2522	0103832	CHIP RESISTOR 120OHM+-5% 0.1W
R2523	0700027	CARBON FILM 100 OHM+-5% 1/8W
R2524	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R2541L	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R2541R	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R2542L	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R2542R	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
R2543L	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2543R	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2544L	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R2544R	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R2545L	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R2545R	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
R2546L	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R2546R	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R2547	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R2548L	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R2548R	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R2549L	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2549R	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2550	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2551	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2552	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
R2553	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R2571	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R2572	0103871	CHIP RESISTOR 220KOHM+-5% 0.1W
R2573	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R2574	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W
R2575	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2576	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R2577	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2578	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R2579	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R2581	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R2582	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R2583	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
R2584	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
R2585	0101841	CARBON FILM 4.7KOHM+-5% 1/4W
R2586	0700067	CARBON FILM 100KOHM+-5% 1/8W
R2591	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2592	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R2593	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2594	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W
R2595	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R2596	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R2751	0700014	CARBON FILM 10OHM+-5% 1/8W
R2851	0700058	CARBON FILM 22KOHM+-5% 1/8W
R2852	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R2853	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R2854	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
R2855	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R4501	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4511	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4512	0101927	CARBON FILM 330 OHM+-5% 1/4W
R4513	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4514	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R4515	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R4516	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R4517	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
R4518	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4519	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4520	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4522	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4523	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W

SYMBOL-NO	P-NO	DESCRIPTION
R4525	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4526	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4527	0103893	CHIP RESISTOR 75 OHM+-5% 1/8W
R4528	0101927	CARBON FILM 330 OHM+-5% 1/4W
R4529	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
R4541L	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4541R	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4551L	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4551R	0103839	CHIP RESISTOR 4700HM+-5% 0.1W
R4552	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R4571L	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R4571R	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R4572L	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R4572R	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
R4573L	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R4573R	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R4591	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
⚠RF0871	0101717	RESISTOR 68 OHM+-5% 1/6W
⚠RF0901	0101725	CHIP RESISTOR 2.2 OHM+-5% 1/4W
RT0501L	AW10117	TIMMER RESISTOR 10KOHM 3-10W
RT0501R	AW10116	TIMMER RESISTOR 4.7KOHM 3-10W
RT0601	5007902	SEMI VARIABLE 220KOHM
		SEMI-CONDUCTORS
D0201	5328301	DIODE MA151WK (MT)
D0203	5339131	DIODE 1SS254
D0204	5339131	DIODE 1SS254
D0206	5328301	DIODE MA151WK (MT)
D0401	5328321	DIODE MA151K (MH)
D0402	5328301	DIODE MA151WK (MT)
D0403	5328321	DIODE MA151K (MH)
D0601	5339131	DIODE 1SS254
D0602	5339131	DIODE 1SS254
D0603	5339231	DIODE 1SR35-100A
D0604	5339231	DIODE 1SR35-100A
⚠D0851	5336553	DIODE S1WBA60B
D0852	CH10191M	DIODE EG01C-T
D0853	CH10331M	DIODE EG01Z-T
D0855	CH10301M	DIODE RB721Q
D0871	5339592	DIODE D1NL40
D0872	CH10361S	DIODE ERC91-02
D0873	5339592	DIODE D1NL40
D0874	CH10331M	DIODE EG01Z-T
D0875	CH10352S	DIODE RK46
D0877	5339131	DIODE 1SS254
D0901	5339131	DIODE 1SS254
D0902	5339131	DIODE 1SS254
D0903	5339131	DIODE 1SS254
D0904	5339131	DIODE 1SS254
D0905	5339131	DIODE 1SS254
D0906	5339131	DIODE 1SS254
D0907	5339131	DIODE 1SS254
D0908	5339131	DIODE 1SS254
D0909	5339131	DIODE 1SS254
D0910	5339131	DIODE 1SS254
D0914	5339131	DIODE 1SS254
D0915	5339131	DIODE 1SS254
D0916	5339131	DIODE 1SS254
D0917	5339131	DIODE 1SS254
D0918	5339131	DIODE 1SS254
D0919	1330011	DIODE DINS4
D1401	5339131	DIODE 1SS254
D1411	5328381	DIODE MA153
D1491	5339131	DIODE 1SS254
D1492	5339131	DIODE 1SS254
D1493	5339131	DIODE 1SS254
D1801	5336301	DIODE 1SV111(NA, UKN)
D1802	5339131	DIODE 1SS254(NA, UKN)
D2101	5380933	LED GL451
D2502	5328302	DIODE MA151WA(MN)
D2503	5328301	DIODE MA151WK (MT)
D2504	5328381	DIODE MA153
D2541L	5328381	DIODE MA153
D2541R	5328381	DIODE MA153
D2542	5328381	DIODE MA153
D2543	5339131	DIODE 1SS254
D2584	5339131	DIODE 1SS254
D2585	5328301	DIODE MA151WK (MT)
D2591	5328381	DIODE MA153
D2701	5339131	DIODE 1SS254
D2703	5339131	DIODE 1SS254
D2704	5339131	DIODE 1SS254
D2705	5339131	DIODE 1SS254(UKN)
D2706	5339131	DIODE 1SS254
D2708	5339131	DIODE 1SS254(NA, VPS)
D2709	5339131	DIODE 1SS254
D2751	5339131	DIODE 1SS254
IC101	CP10641	IC SDA5649(NA, VPS)
IC0201	CK10811R	IC LA7439M
IC0202	CK10822R	IC LC89973M
IC0203	1346881	IC M52364P
IC0401	5300641	IC BA7755
IC0501	1365754	IC AN3961NFBPAA
IC0601	1366863	IC HD49781F
IC0651	5352714	IC NJM4558M
IC0851	CW10132	IC STR-M6545
IC0871	1360452	IC TL431CLP
IC0901	CK11007	IC M38185ME-103FP(NA, VPS)
IC0901	CK11008	IC M38185ME-118FP(UKN)
IC0902	CP10311R	IC PST9131
IC0903	CP10911	IC ST24C01CB1
IC0904	CP10291	IC BA6209
IC1101	1361752	IC XRA7740S
IC1102	CP10281	IC LA7415
IC1401	1340782	IC M35010-013SP
IC1441	1352512	IC BA7046F
IC1801	CK12201	IC SAA7283GP(NA, UKN)
IC1802	5352714	IC NJM4558M (NA, UKN)
IC1851	CZ10141	IC TDA9840 (NA, VPS)
IC1852	1346191	IC TDA9821 (NA, VPS)
IC2101	5327521	PHOTO TRANSISTOR SPI-315-C
IC2102	5327521	PHOTO TRANSISTOR SPI-315-C
IC2521	CP10331	IC NJM2234L
IC4511	1361921	IC BA7630S
IC4551	CP10351	IC LA7151
IC4552	CP10351	IC LA7151
LED0751	CH10181G	LED
LED0752	CH10181G	LED
LED2701	1330302	DIODE SRZ989A-F
LED2702	1330302	DIODE SRZ989A-F
⚠PC0851	CF10151G	TRANSISTOR PC120FY
Q0202	5328971	TRANSISTOR 2SC2412KBRST
Q0204	5328793	TRANSISTOR DTC144K-26
Q0205	5328971	TRANSISTOR 2SC2412KBRST
Q0206	5328971	TRANSISTOR 2SC2412KBRST
Q0207	5328793	TRANSISTOR DTC144K-26
Q0208	5328971	TRANSISTOR 2SC2412KBRST
Q0210	5328971	TRANSISTOR 2SC2412KBRST
Q0211	5328971	TRANSISTOR 2SC2412KBRST

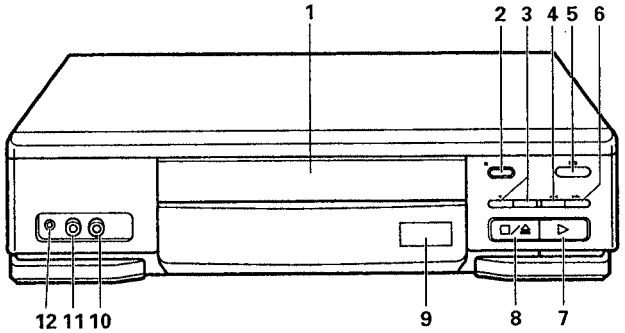
SYMBOL-NO	P-NO	DESCRIPTION
Q0212	5328793	TRANSISTOR DTC144K-26
Q0213	5328795	TRANSISTOR DTA144EK-16
Q0214	5328795	TRANSISTOR DTA144EK-16
Q0215	5328793	TRANSISTOR DTC144K-26
Q0221	5328793	TRANSISTOR DTC144K-26
Q0223	5328793	TRANSISTOR DTC144K-26
Q0224	5328793	TRANSISTOR DTC144K-26
Q0225	5328793	TRANSISTOR DTC144K-26
Q0301	5328971	TRANSISTOR 2SC2412KBRST
Q0302	5328971	TRANSISTOR 2SC2412KBRST
Q0381	5327141	TRANSISTOR 2SD468C
Q0383	5328795	TRANSISTOR DTA144EK-16
Q0384	5328793	TRANSISTOR DTC144K-26
Q0401	5323172	TRANSISTOR 2SC1214CD
Q0402	5326201	TRANSISTOR FMG2
Q0406	5328793	TRANSISTOR DTC144K-26
Q0407	5328793	TRANSISTOR DTC144K-26
Q0409	5323172	TRANSISTOR 2SC1214CD
Q0410	5328971	TRANSISTOR 2SC2412KBRST
Q0411	5328971	TRANSISTOR 2SC2412KBRST
Q0412	5326101	TRANSISTOR FMW1
Q0413	5328961	TRANSISTOR 2SA1037KERS
Q0414	5328795	TRANSISTOR DTA144EK-16
Q0506	5328971	TRANSISTOR 2SC2412KBRST
Q0601	5327141	TRANSISTOR 2SD468C
Q0871	5324863	TRANSISTOR 2SD2061
Q0874	1321341	TRANSISTOR 2SD1765
Q0875	5328793	TRANSISTOR DTC144K-26
Q0901	5328793	TRANSISTOR DTC144K-26
Q0902	5328331	TRANSISTOR 2SB709AR
Q0903	5327141	TRANSISTOR 2SD468C
Q0904	1323081	TRANSISTOR 2SA1036K
Q0905	5328971	TRANSISTOR 2SC2412KBRST
Q1401	5328971	TRANSISTOR 2SC2412KBRST
Q1404	5328971	TRANSISTOR 2SC2412KBRST
Q1405	5328971	TRANSISTOR 2SC2412KBRST
Q1451	5328971	TRANSISTOR 2SC2412KBRST
Q1482	5328962	TRANSISTOR 2SA1037K
Q1491	5327141	TRANSISTOR 2SD468C
Q1492	5327141	TRANSISTOR 2SD468C
Q2101	5324661	PHOTO TRANSISTOR PT-483F1H
Q2102	5324661	PHOTO TRANSISTOR PT-483F1H
Q2501	5328793	TRANSISTOR DTC144K-26
Q2502	5328962	TRANSISTOR 2SA1037K
Q2503	5328962	TRANSISTOR 2SA1037K
Q2541L	5328971	TRANSISTOR 2SC2412KBRST
Q2541R	5328971	TRANSISTOR 2SC2412KBRST
Q2542	5328793	TRANSISTOR DTC144K-26
Q2543	5328962	TRANSISTOR 2SA1037K
Q2544	5326101	TRANSISTOR FMW1
Q2545	5328971	TRANSISTOR 2SC2412KBRST
Q2571	5328971	TRANSISTOR 2SC2412KBRST
Q2572	5328971	TRANSISTOR 2SC2412KBRST
Q2573	5328971	TRANSISTOR 2SC2412KBRST
Q2574	5328795	TRANSISTOR DTA144EK-16
Q2581	5327141	TRANSISTOR 2SD468C
Q2582	5327141	TRANSISTOR 2SD468C
Q2583	5327141	TRANSISTOR 2SD468C
Q2584	5327141	TRANSISTOR 2SD468C
Q2585	5327141	TRANSISTOR 2SD468C
Q2591	5328971	TRANSISTOR 2SC2412KBRST
Q2592	5328962	TRANSISTOR 2SA1037K
Q2851	5328331	TRANSISTOR 2SB709AR
Q2852	5328971	TRANSISTOR 2SC2412KBRST
Q4511	5328962	TRANSISTOR 2SA1037K
Q4512	5328962	TRANSISTOR 2SA1037K
Q4551	5327091	TRANSISTOR 2SD1504E
⚠QF0851	5721941	IC PROTECTOR
⚠QF0871	5721946	IC PROTECTOR (N15)
⚠QF0872	5721941	IC PROTECTOR
⚠QF0873	5721944	IC PROTECTOR, ICP-N25
⚠QF0901	5721941	IC PROTECTOR
⚠QF2584	5721941	IC PROTECTOR
⚠QF2589	5721941	IC PROTECTOR
RM0701	1388911	LIGHT DETECTING UNITGP1U581X(NA, VPS)
RM0701	CW10141	MODULE SPS-424-1-N (UKN)
ZD0871	5339268	DIODE HZS11B2
ZD0901	5339571	DIODE UTZ6.2B
ZD0903	5339462	ZENER DIODE HZS12A1
ZD0904	5339296	DIODE HZS5B2
ZD0905	5339489	ZENER DIODE HZS7A2
ZD1491	5339282	DIODE HZS6-B2
ZD2501	5339406	DIODE UTZJ30C
ZD2584	5339263	DIODE HZS7-A1
ZD2585	5339294	DIODE HZS11B1
		TRANSFORMERS
T0401	5261533	TRANSFORMER
T0402	5230354	TRANSFORMER
⚠T0851	BT10161	TRANSFORMER, POWER
		COILS
L101	0773096	COIL, CHOKE 220UH
L0201	5159153	CHOKE COIL 82UH
L0202	5159146	CHOKE COIL 27UH
L0203	5159143	CHOKE COIL 15UH
L0204	5121293	COIL
L0205	0770057	CHOKE COIL 100UH+-5%
L0206	5121291	COIL 33UH
L0207	5159156	CHOKE COIL 150UH
L0208	0770057	CHOKE COIL 100UH+-5%
L0214	5159149	CHOKE COIL 47UH
L0215	5159155	CHOKE COIL 120UH+-10%
L0216	5159155	CHOKE COIL 120UH+-10%
L0218	5159156	CHOKE COIL 150UH
L0301	0770053	CHOKE COIL 47UH+-5%
L0302	5159147	CHOKE COIL 33UH
L0401	0770057	CHOKE COIL 100UH+-5%
L0402	5159113	COIL, CHOKE 8.2MH
L0403	0770057	CHOKE COIL 100UH+-5%
L0501	0770057	CHOKE COIL 100UH+-5%
L0502	0770057	CHOKE COIL 100UH+-5%
L0751	5121294	COIL 100UH
⚠L0851	5220242	COIL
⚠L0852	5220242	COIL
L0871	BH10111R	COIL 22UH
L0872	BH10114R	COIL 10UH
L0881	0770057	CHOKE COIL 100UH+-5%
L0901	5121294	COIL 100UH
L1101	0770057	CHOKE COIL 100UH+-5%
L1102	0770057	CHOKE COIL 100UH+-5%
L1402	5121288	COIL 15UH
L1441	5121294	COIL 100UH
L1801	5121286	COIL 6.8UH (NA, UKN)
L1802	0770057	CHOKE COIL 100UH+-5%(NA, UKN)
L1803	0770057	CHOKE COIL 100UH+-5%(NA, UKN)
L1804	0770057	CHOKE COIL 100UH+-5%(NA)
L1805	0770048	CHOKE COIL 22UH+-5% (NA, UKN)

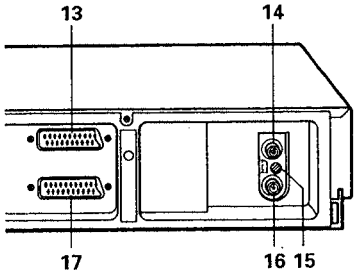
SYMBOL-NO	P-NO	DESCRIPTION
L1806	5159111	CHOKE COIL 5600UH (NA, VPS)
L1807	0770057	CHOKE COIL 100UH+-5% (NA, UKN)
L1808L	5159113	COIL, CHOKE 8.2MH (NA, UKN)
L1808R	5159113	COIL, CHOKE 8.2MH (NA, UKN)
L2501	0770057	CHOKE COIL 100UH+-5%
L2531	0770057	CHOKE COIL 100UH+-5%
L4551	0770057	CHOKE COIL 100UH+-5%
		CRYSTALS
X0301	5778871	CRYSTAL
X0901	5778274	CRYSTAL
X0902	BP10251	CRYSTAL
X1401	5778462	CRYSTAL
X1801	BP10471	CRYSTAL (NA, UKN)
X1851	5781631	CRYSTAL (NA, VPS)
		MISCELLANEOUS
BL0751	5272378	LC FILTER
BL0752	5272378	LC FILTER
BL0851	5272379	COIL
BL0861	5272376	FILTER
BL0862	5272379	COIL
BL0863	5272379	COIL
BL0864	5272379	COIL
BL0865	5272379	COIL
BL0866	5272379	COIL
BL0901	5272376	FILTER
BL1801	5272378	LC FILTER (NA, UKN)
BL1802	5272378	LC FILTER (NA, UKN)
BL1803	5272378	LC FILTER (NA, UKN)
BL4581L	5272378	LC FILTER
BL4581R	5272378	LC FILTER
BL4582L	5272378	LC FILTER
BL4582R	5272378	LC FILTER
BL4583L	5272378	LC FILTER
BL4583R	5272378	LC FILTER
BL4584L	5272378	LC FILTER
BL4584R	5272378	LC FILTER
BL4585L	5272378	LC FILTER
BL4585R	5272378	LC FILTER
CF1851	5160561	FILTER (NA, VPS)
CF1852	5160562	FILTER (NA, VPS)
DG2701	DD10112	FLOURESCENT DISPLAY
⚠F0851	5723351	FUSE
⚠FH0851	5722411	HOLDER, FUSE
⚠FH0852	5722411	HOLDER, FUSE
J4501	EQ10151	JACK
J4511	EQ10152	JACK
J4571	5696171	PLATE
JK0751	5674611	JACK
JK0752	5655083	JACK, 3P
S0701	5634884	SWITCH
S0702	5634884	SWITCH
S0703	5634884	SWITCH
S0704	5634884	SWITCH
S0705	5634884	SWITCH
S0706	5634884	SWITCH
S0707	5634884	SWITCH
S0708	5634884	SWITCH
S0709	5634884	SWITCH
S2101	5635631	SWITCH
S2102	5635331	SWITCH
S2104	5610891	SWITCH

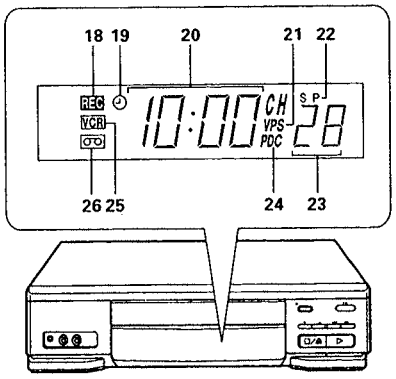
SYMBOL-NO	P-NO	DESCRIPTION

CUSTOMER CONTROLS

VTR Customer Controls

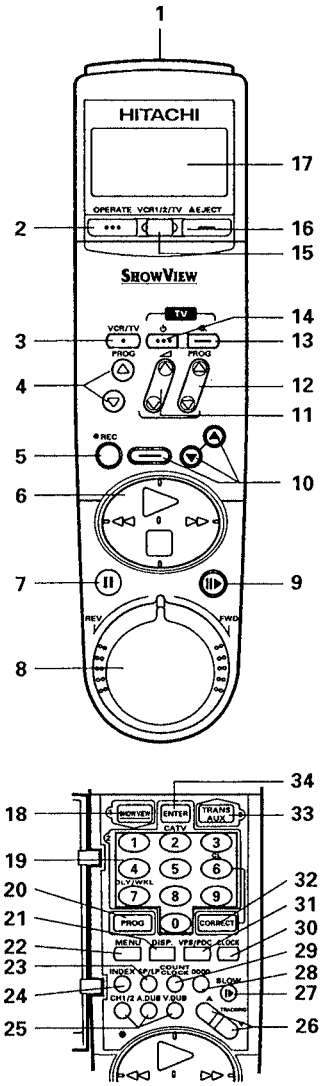






Item No.	Function	Page
1	Cassette compartment	17
2	REC/IRT button	22
3	TV PROG button — programme select	13
4	Rewind button	19
5	Operate/Standby button	2
6	Fast forward button	19
7	Play button	19
8	Stop/Eject button	19
9	Remote control receiving window	10
10	AUDIO IN socket	43
11	VIDEO IN socket	43
12	EDIT IN/OUT socket	45
13	Decoder socket	47
14	AERIAL — signal input	6
15	RF CHANNEL ADJ — preset to CH37	11
16	RF OUT — signal out to TV	6
17	Scart socket	7
	VCR Display	
18	REC — record (flashes during record pause)	22
19	Timer indicator	31
20	Time, Time counter or VCR mode indicator	19
	PLAY— playback	19
	SRCH— double-speed play and visual search ("–" appears during reverse direction viewing)	19
	SLOW— slow play	19
	REW — rewind	19
	FFWD— fast forward	19
	STILL— play pause	19
21	VPS indicator	60
22	Tape speed SP/LP	17
23	TV programme number or Auxiliary (L1/L2/L3)	22
24	PDC indicator	60
25	VCR, operate mode	19
26	Tape-in indicator	17

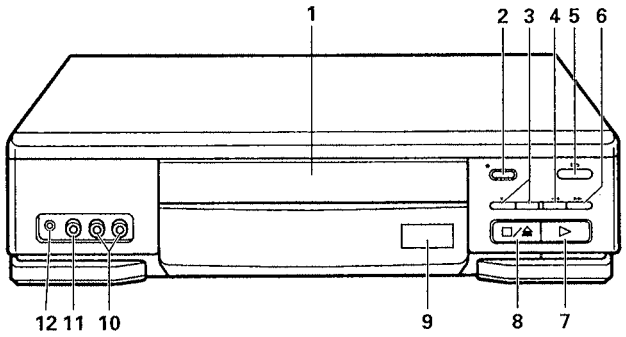
Remote Control Handset Customer Controls

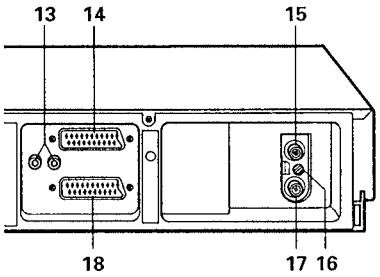


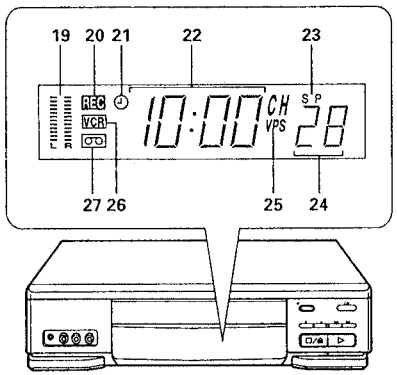
Item No.	Function	Page
1	Transmission window	10
2	OPERATE—switch between operate and standby mode	25
3	VCR/TV select button	19
4	Programme up/down button	13
5	REC — record button	22
6	Tape transport button ▷ — playback ◁◁ — fast rewind or search ▷▷ — fast forward or search □ — stops play/record function	19
7	Pause/still button	19
8	Shuttle ring	21
9	Frame advance during still	19
10	These buttons are not used.	—
11	TV volume buttons (Buttons used exclusively to operate the TV)	55
12	TV PROG button	55
13	TV mute button	55
14	TV Operate button	55
	Note: For buttons 11 – 14 are used only when operating the TV.	
15	VCR1/2/TV select button	10
16	EJECT — ejects cassette	17
17	Display clock/timer programme information	16
18	ShowView programming	26
19	Number buttons	16
20	PROG — to enter timer programme information	29
21	DISP. — to recall on-screen display	40
22	MENU — to recall OSD menu	39
23	SP/LP — changes tape speed during record	17
24	INDEX button — INDEX/GO-TO feature	37
25	These buttons are not used	—
26	TRACKING buttons	20
27	SLOW button	19
28	0000 — clears time counter	34
29	COUNT/CLOCK — changes VCR display	34
30	CLOCK — enter or correct time on handset	16
31	VPS/PDC button	60
32	CORRECT button	16
33	TRANS/AUX button — transmits data, select L1,L2 or L3 input	27
34	CATV/ENTER button — to preset CATV stations or enter ShowView number	26

CUSTOMER CONTROLS

VTR Customer Controls







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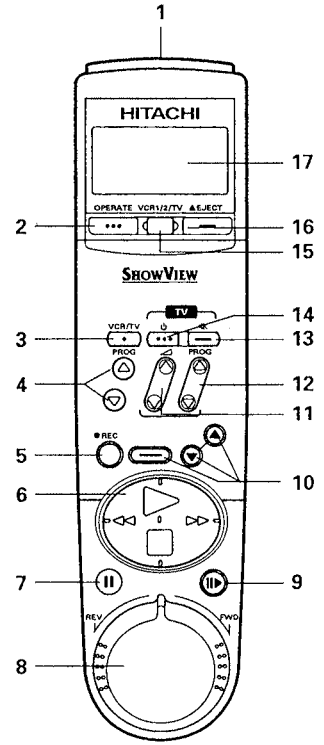
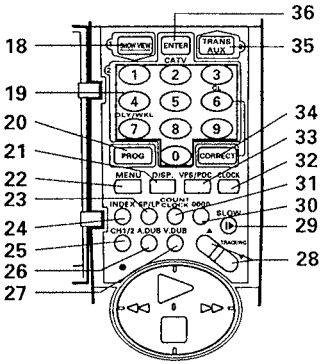
5	Operate/Standby button	2
6	Fast forward button	19
7	Play button	19
8	Stop/Eject button	19
9	Remote control receiving window	10
10	AUDIO IN (L-mono),(R) socket	48
11	VIDEO IN socket	48
12	EDIT IN/OUT socket	50
13	AUDIO OUT (L-mono), (R) socket for stereo system connection	–
14	Decoder socket	52
15	AERIAL — signal input	6
16	RF CHANNEL ADJ — preset to CH37	11
17	RF OUT — signal out to TV	6
18	Scart socket	7
	VCR Display	
19	Audio level indicators	20
20	REC — record (flashes during record pause)	22
21	Timer indicator	31
22	Time, Time counter or VCR mode indicator	19
	PLAY— playback	19
	SRCH— double-speed play and visual search ("–" appears during reverse direction viewing)	19
	SLOW— slow play	19
	REW — rewind	19
	FFWD— fast forward	19
	STILL— play pause	19
23	Tape speed SP/LP	17
24	TV programme number or Auxiliary (L1/L2/L3)	22
25	VPS indicator	66
26	VCR, operate mode	19
27	Tape-in indicator	17

Remote Control Handset Customer Controls





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7	Pause/still button	19
8	Shuttle ring	21
9	Frame advance during still	19
10	These buttons are not used.	—
11	TV volume buttons — Buttons used	61
12	TV PROG button — exclusively to	61
13	TV mute button — operate the TV	61
14	TV Operate button	61
	Note: Four buttons 11 – 14 are used only when operating theTV.	
15	VCR1/2/TV select button	10
16	EJECT — ejects cassette	17
17	Display clock/timer programme information	16
18	ShowView programming	26
19	Number buttons	16
20	PROG — to enter timer programme information	29
21	DISP. — to recall on-screen display	39
22	MENU — to recall OSD menu	38
23	SP/LP — changes tape speed during record	17
24	INDEX button — INDEX/GO-TO feature	37
25	CH1/2 button	20
26	A.DUB button	46
27	V.DUB button	44
28	TRACKING buttons	20
29	SLOW button	19
30	0000 — clears time counter	34
31	COUNT/CLOCK — changes VCR display	34
32	CLOCK — enter or correct time on handset	16
33	VPS/PDC button	66
34	CORRECT button	16
35	TRANS/AUX button — transmits data, select L1,L2 or L3 input	27
36	CATV/ENTER button — to preset CATV stations or enter ShowView number	26

HITACHI

VT-M430E(CT),(PV)
VT-F450E(UKN),(NA)
VT-F450E(VPS)

TK № 4504E,G Video & Personal Media Systems Division, Tokai Ope

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HITACHI

TK | No.4504E,G-1

SERVICE MANUAL
Wartungsanleitung

VT-M430E(CT)
VT-M430E(PV)
VT-F450E(UKN)
VT-F450E(NA)
VT-F450E(VPS)

SUPPLEMENT

Ergänzung

This service manual is issued as a supplement to the VT-M430E/F450E manual (No. 4504E,G) issued previously.
Mistakes were found in the printing of the circuit board diagrams on pages 5-51 – 5-54 of the VT-M430E/F450E (No. 4504E,G). Please replace these pages with this supplement.

Diese Wartungsanleitung wurde als Ergänzung zu der früher veröffentlichten VT-M430E/F450E Anleitung (Nr. 4504E,G) veröffentlicht.
Druckfehler wurden in den Leiterplatten-Diagrammen auf den Seiten 5-51 bis 5-54 der VT-M430E/F450E Anleitung (Nr. 4504E,G) festgestellt. Bitte ersetzen Sie diese Seiten durch diese Ergänzung.

SHOWVIEW

VHS

This video deck is a VHS type video recorder. For proper operation, only the VHS type cassette must be used.

VHS

Dieser Video-Recorder entspricht dem VHS-Format. Für richtigen Betrieb müssen daher VHS-Magnetband-Cassetten verwendet werden.

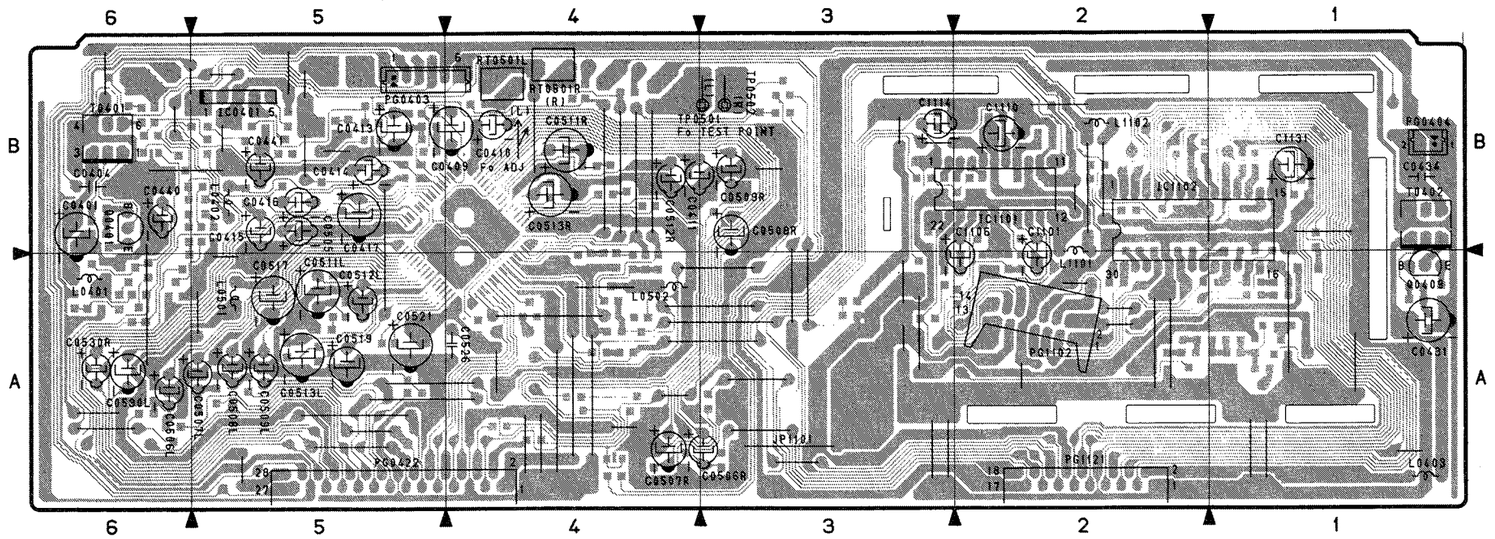
SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

Änderungen der Technischen Daten und Teile im Sinne ständider Verbesserung vorbehalten.

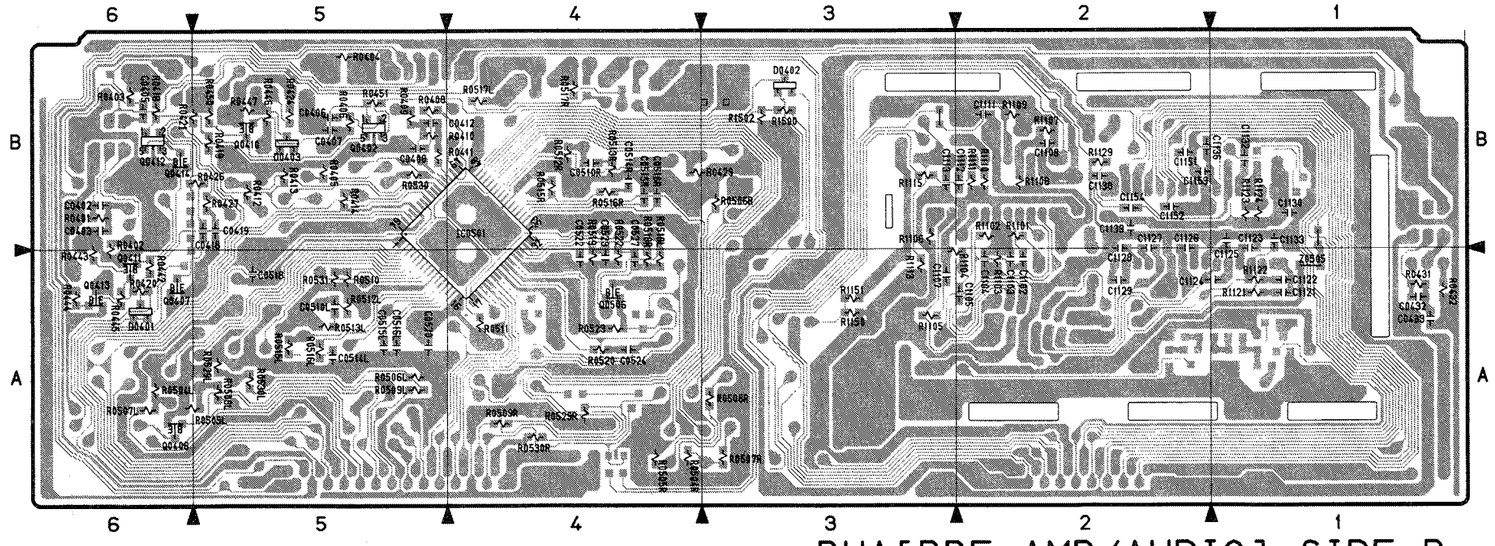
VIDEO CASSETTE RECORDER
Video-Cassettenrecorder

June 1995 Video & Personal Media Systems Division, Tokai Operation

PHA CIRCUIT BOARD



PHA[PRE AMP/AUDIO]-SIDE A-
[For VT-F450E]



PHA[PRE AMP/AUDIO]-SIDE B-
[PATTERN No.JA1015-9]
[For VT-F450E]

IDENTIFICATION OF PARTS LOCATION

PHA [PRE AMP/AUDIO]

Symbol No.	Parts Location
C	
C401	A-6B
C402	B-6B
C403	B-6B
C404	A-6B
C405	B-6B
C406	B-5B
C407	B-5B
C408	B-5B
C409	A-4B
C410	A-4B
C411	A-3B
C412	B-5B
C413	A-5B
C414	A-5B
C415	A-5B
C416	A-5B
C417	A-5B
C418	B-5B
C419	B-5B
C431	A-1A
C432	B-1A
C433	B-1A
C434	A-1B
C440	A-6B
C441	A-5B
C505	A-5B
C506L	A-6A
C506R	A-3A
C507L	A-5A
C507R	A-4A
C508L	A-5A
C508R	A-3B
C509L	A-5A
C509R	A-3B
C510L	B-5A
C510R	B-4B
C511L	A-5A
C511R	A-4B
C512L	A-5A
C512R	A-4B
C513L	A-5A
C513R	A-4B
C514L	B-5A
C514R	B-4B
C515L	B-5A
C515R	B-4B
C516L	B-5A
C516R	B-4B
C517	A-5A
C518	B-5A
C519	A-5A
C520	B-5A
C521	A-5A
C522	B-4A
C523	B-4A
C524	B-4A
C526	A-4A
C527	B-4A
C530L	A-6A
C530R	A-6A
C1101	A-2A
C1102	B-2A
C1103	B-2A
C1104	B-2A
C1105	B-2A
C1106	A-2A
C1107	B-3A
C1108	B-2B
C1110	A-2B
C1111	B-2B
C1112	B-2B
C1113	B-3B
C1114	A-3B
C1121	B-1A
C1122	B-1A
C1123	B-1B
C1124	B-1A
C1125	B-1B
C1126	B-2A
C1127	B-2A
C1128	B-2A
C1129	B-2A
C1130	B-1B
C1131	A-1B
C1132	B-1B
C1133	B-1B
C1136	B-2B
C1138	B-2B
C1139	B-2B
C1151	B-2B
C1152	B-2B
C1153	B-2B
C1154	B-2B
D	
D401	B-6A
D402	B-3B
D403	B-5B
IC	
IC401	A-5B
IC501	B-4B
IC1101	A-2B
IC1102	A-2B
L	
L401	A-6A
L402	A-5B
L403	A-1A
L501	A-5A
L502	A-4A
L1101	A-2A
L1102	A-2B
PG	
PG403	A-5B
PG404	A-1B
PG422	A-5A
PG1102	A-2A
PG1121	A-2A
Q	
Q401	A-6B
Q402	B-5B
Q406	B-6A
Q407	B-6A
Q409	A-1A
Q410	B-5B
Q411	B-6A
Q412	B-6B
Q413	B-6A
Q414	B-6B
Q506	B-4A
R	
R401	B-6B
R402	B-6A
R403	B-6B
R404	B-5B
R405	B-5B
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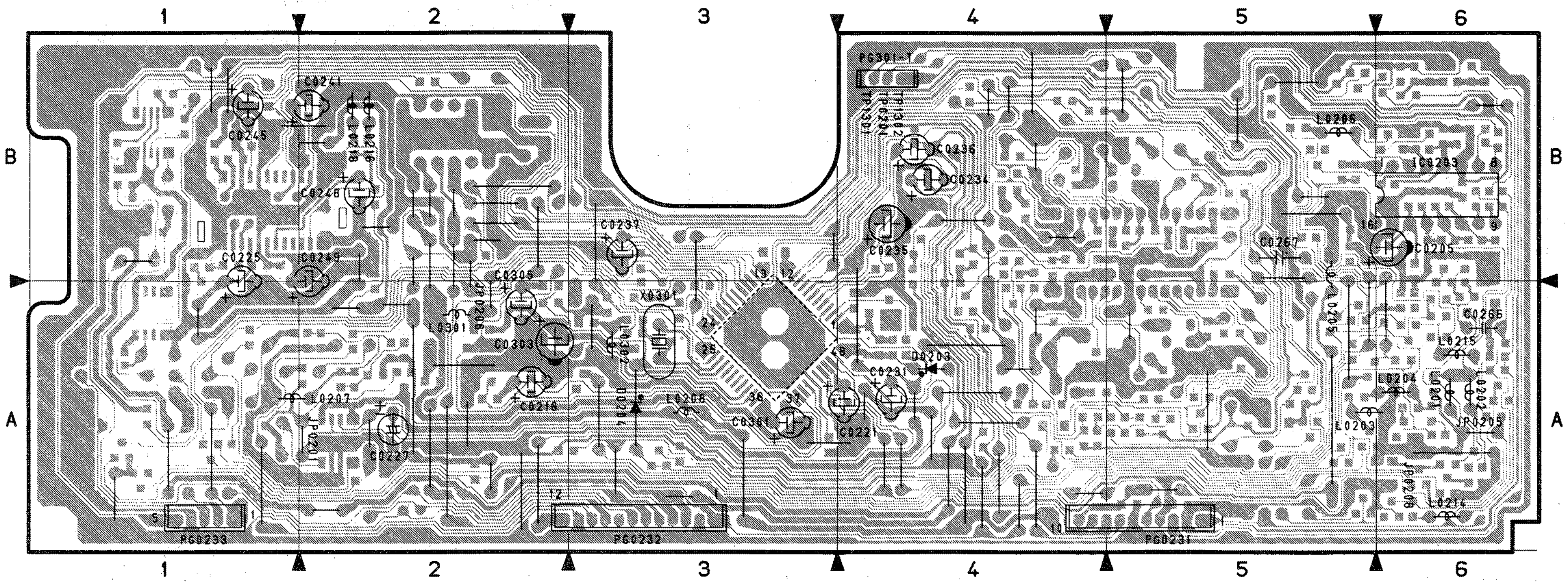
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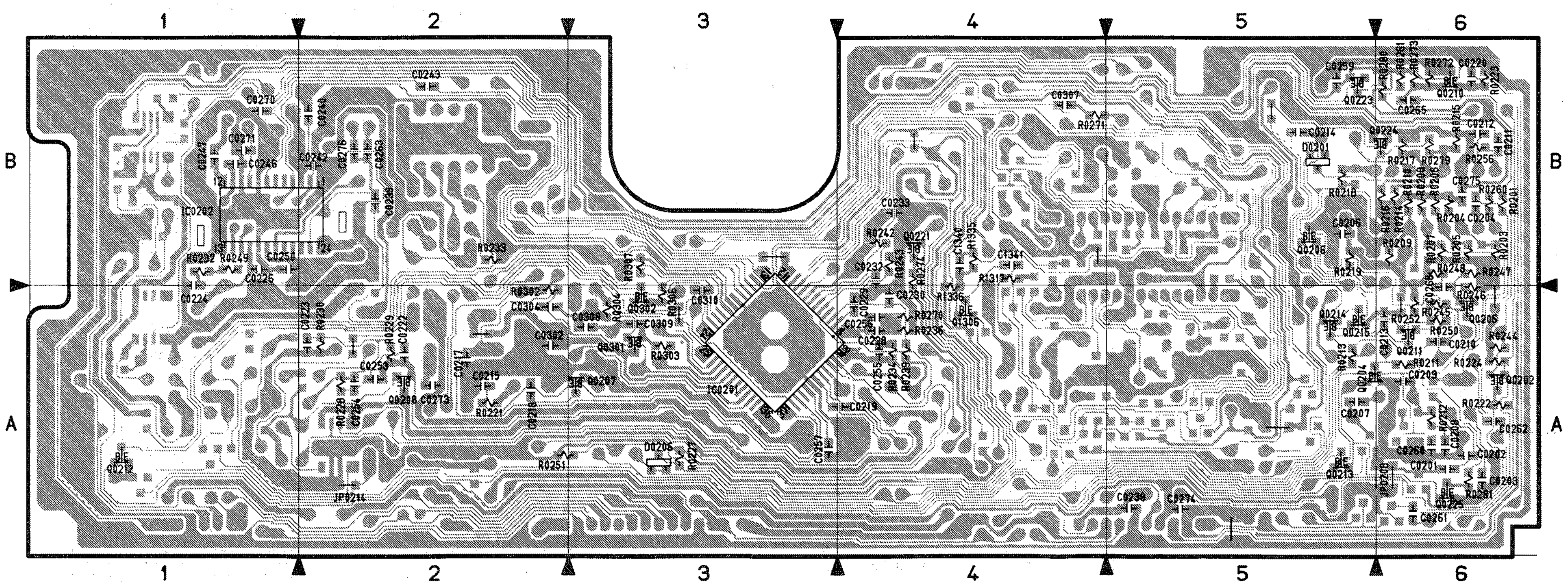
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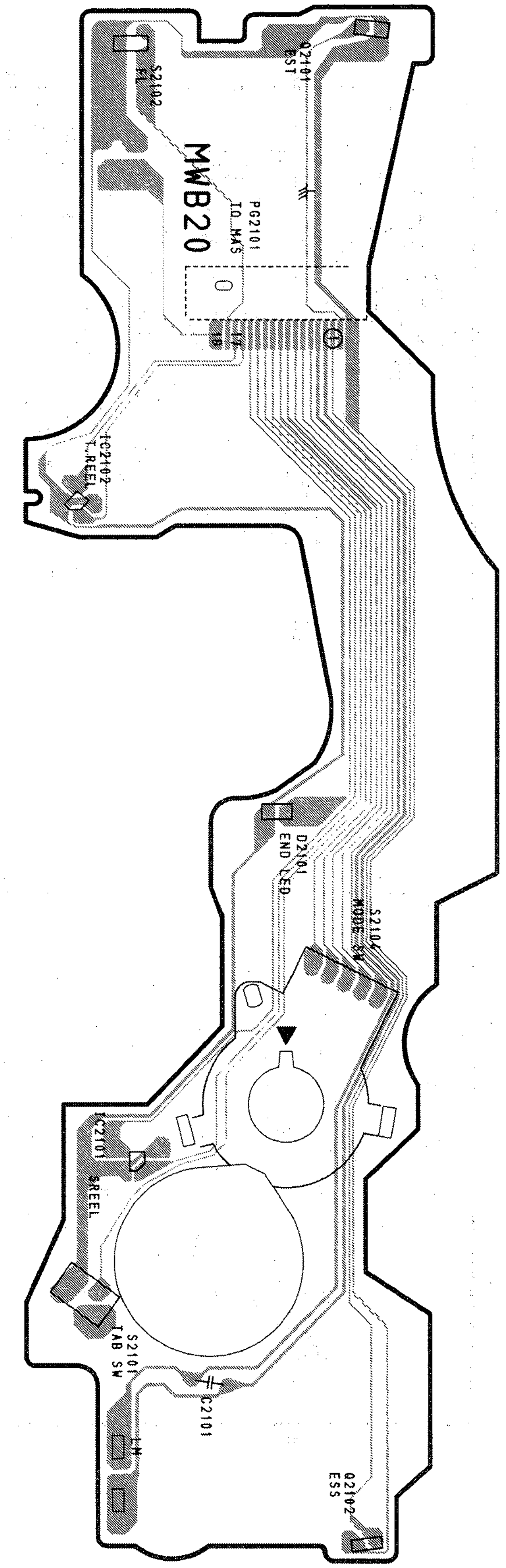

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